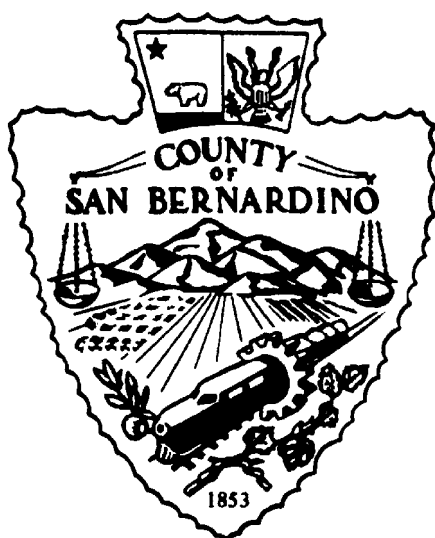

San Bernardino County

AIDS Program Report

<http://www.sbcounty.gov/pubhlth/html/reports/aids/title.htm>

AIDS/HIV Disease Reported Through December 31, 2000



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Introduction

The annual AIDS report was originally developed to provide the public, educators, physicians and other service providers with an epidemiologic description of the acquired immunodeficiency syndrome (AIDS) and human immunodeficiency virus (HIV) infection in San Bernardino County. Over time, it has grown to include more than 75 figures and tables, a brief history of the county, choroplethic maps and descriptions of other HIV-related services provided by the San Bernardino County Department of Public Health and others.

Specifically, the AIDS report includes a brief history and geographic description of the county, a sociodemographic profile of the population by health planning region and discussions of reported AIDS cases by selected demographic variables with analyses over time. It also includes a mortality analysis, an estimate of the number of persons living with HIV, years of potential life lost due to AIDS, leading causes of death for San Bernardino County residents and a discussion of the economic impact of the epidemic. The report contains data describing the clients who receive outpatient primary medical care from the San Bernardino County Department of Public Health. It also includes a description of anonymous and confidential HIV antibody counseling and testing programs; blinded seroprevalence studies such as that for child-bearing women; and screening programs for blood donors and military recruits. Finally, it includes a discussion of other diseases/conditions of possible relevance to the HIV epidemic, the AIDS Drug Assistance Program (ADAP), Housing Opportunities for Persons with AIDS (HOPWA), and prevention education efforts within the county.

History and Geography

San Bernardino County is located in the inland portion of Southern California (see figure 1) and is geographically the largest county in the contiguous United States. It originally constituted the eastern portion of Los Angeles County. However, on April 26, 1853, the Senate and Assembly of the State of California approved the division of Los Angeles County, “beginning at a point where a due south line drawn from the highest peak of the Sierra de Santiago intersects

the northern boundary of San Diego County; thence running along the summit of said Sierra to the Santa Ana river, between the ranch of Sierra and residence of Bernardo Yorba; thence across the Santa Ana river along the summit of the range of hills, that lie between the Coyotes and Chino, (leaving the ranches of Ontiveras and Ybana to the west of this line) to the southeast corner of the ranch of San Jose; thence along the eastern boundaries of said ranch and of San Antonio, and the western and northern boundaries of Cucamonga ranch and the ravine of Cucamonga; thence up said ravine to its source in the coast range; thence due north to the northern boundary of Los Angeles County; thence northeast to the State line; thence along the State line to the northern boundary line of San Diego County; thence westerly along the northern boundary of San Diego to the place of beginning.” In 1893, Riverside County was formed from the southern section of San Bernardino County and the northern portion of San Diego County. San Bernardino County currently covers 20,053 square miles and is larger than the combined land masses of New Jersey, Massachusetts, Delaware, and Rhode Island.



FIGURE 1. Map of the State of California with San Bernardino County being the largest geographically.

San Bernardino County is bordered on the north by Inyo County, the northeast by the state of Nevada, the east by the state of Arizona, the south by Riverside County, the southwest by Orange

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County and the west by Los Angeles and Kern counties.

The county has diverse geographical features including the vast Mojave Desert, San Bernardino National Forest and San Gorgonio Wilderness Area; numerous desert valleys (Cadiz, Chemehuevi, Ivanpah, Lucerne, Mesquite, Piute, Searles, Shadow, Summit, Superior, Victor and Ward); extensive mountain ranges (Bristol, Bullion, Cady, Granite, Kelso, Mesquite, Newberry, Quail, Sacramento, San Bernardino, Old Woman and Owlshead) and a number of lakes (Arrowbear, Arrowhead, Big Bear, Green Valley, Gregory and Silverwood). Its eastern border is defined by the Colorado River. The county has all five major climatic zones from low desert to alpine. The county's lowest point is in Death Valley (282 feet below sea level) and its highest peak is San Gorgonio Mountain (11,502 feet above sea level).

Department of Public Health

The San Bernardino County Board of Supervisors became legally authorized for health administration in 1872. A county health officer was first permitted in 1897 and made mandatory in 1909. The Department of Public Health was established in 1931. The Department conducts a comprehensive public health program which includes services mandated by the state, a substantial range of public health-related personal health services, and a number of county regulatory programs. The Department is divided into four divisions which are: Disease Control and Prevention, Environmental Health Services, Community Health Services (Child, Adolescent and Family Health) and Administrative Services. The divisions are further subdivided into 23 sections and 36 programs. A categorical AIDS Program was established in 1988 and is housed within the Disease Control and Prevention section.

Sociodemographic Profile

According to 2000 Census data, San Bernardino County's 1,709,434 residents ranked fourth in terms of population among California counties and twelfth among those within the United States. That is a 21% increase in population size since the 1990 Census. The median annual income in 2000 for San Bernardino County residents was \$36,876.

Eighteen percent of the total population within the county lived below the poverty level. In 1990, ninety-three percent of the county's population resided in urban areas and 7% resided in rural areas. The 2001 estimated mid-year population for San Bernardino County was 1,766,237 representing a 25% increase when compared with 1990 census data (source: U.S. Census Bureau).

As of 2000, San Bernardino County had 2,949 active non-federal physicians. There were 558 county residents per physician whereas the state of California averaged 410 residents per physician. In 1998, San Bernardino County had 21 general acute care hospitals and 2.1 licensed general acute care beds per 1000 population in comparison to 2.2 for the state that same year. In addition, San Bernardino County also has 12 licensed community and free clinics. (source: California Department of Health Services, *Health Data Summaries for California Counties 2000*).

TABLE 1.

Cities/Communities by health planning region, San Bernardino County		
East Valley	West Valley	Desert
Big Bear City	Alta Loma	Adelanto
Big Bear Lake	Chino	Apple Valley
Bloomington	Chino Hills	Baker
Blue Jay	Etiwanda	Barstow
Cedar Glen	Fontana	Big River
Colton	Montclair	Cadiz
Crestline	Ontario	Earp
Crestpark	Rancho Cucamonga	Helendale
Devore	Upland	Hesperia
Erwin Lake		Hinkley
Fawnskin		Joshua Tree
Forest Falls		Landers
Grand Terrace		Lucerne Valley
Highland		Morongo Valley
Lake Arrowhead		Needles
Loma Linda		Newberry Springs
Lytle Creek		Phelan
Mentone		Pinon Hills
Redlands		Pioneertown
Rialto		Trona
Rimforest		Twenty-nine Palms
Running Springs		Victorville
San Bernardino		Wonder Valley
Skyforest		Wrightwood
Sugarloaf		Yermo
Twin Peaks		Yucca Valley
Yucaipa		

San Bernardino County's borders envelope more than 50 urban centers, suburban cities, and rural and remote communities. For the purposes of health planning, the county has been divided into three regions. The East Valley and West Valley health planning regions are located in the extreme

southwest corner of the county while the Desert Region constitutes the remainder. Table 1 presents those cities/communities within San Bernardino County by health planning region. Table 2 shows the differences among the three San Bernardino County health planning regions. Based on 2000 Census data, the East Valley had a greater proportion of African Americans (44%) when compared to the West Valley and Desert Regions (38% and 17%, respectively). The East and West Valley regions had substantially greater proportions of Latinos (36% and 50%, respectively) than did the Desert Region (14%) as well as Asian/Pacific Islanders (32% and 57% respectively) versus 11% in the Desert Region.

There were a higher proportion of adults aged 55 and older in the East Valley and West Valley

regions (37% and 34%, respectively) than were in the Desert Region at 29%.

According to the 1990 Census data, the West Valley was the wealthiest of the three health planning regions in terms of annual median household income. The proportions of people with high school diplomas were comparable across all health planning regions. The proportions of those with bachelors' degrees were comparable for the West and East Valley regions (17% and 16%, respectively) while that for the desert was lower (11%). The proportion of persons employed over 16 years of age was also highest in the West Valley (70%) while those for the East Valley (64%) and desert (61%) were comparable. Conversely, unemployment rates were lowest in the West Valley (6%) and higher in the East Valley (8%) and Desert Regions (10%).

TABLE 2.

Sociodemographic profile by health planning region, San Bernardino County, 2000

	East Valley		West Valley		Desert		Total	
Male	294,471	49%	364,505	50%	194,048	51%	853,024	50%
Female	307,585	51%	361,942	50%	186,883	49%	856,410	50%
Total	602,056		726,447		380,931		1,709,434	100%
Caucasian	250,463	42%	263,535	36%	238,224	63%	752,222	44%
African American	66,613	11%	57,635	8%	25,953	7%	150,201	9%
Native American	3,583	<1%	2,511	<1%	3,710	<1%	9,804	1%
Latino	238,974	40%	337,925	47%	92,488	24%	669,387	39%
Asian/Pacific Islander	26,382	4%	47,390	7%	8,769	2%	82,541	5%
Other	16,041	3%	17,451	2%	11,787	3%	45,279	3%
Total	602,056		726,447		380,931		1,709,434	100%
<5	51,141	8%	63,034	9%	28,901	8%	143,076	8%
5-9	58,555	10%	72,031	10%	33,274	9%	163,860	10%
10-14	56,320	9%	67,385	9%	34,497	9%	158,202	9%
15-19	50,362	8%	59,768	8%	31,000	8%	141,130	8%
20-24	41,908	7%	51,697	7%	27,974	7%	121,579	7%
25-34	83,332	14%	113,676	16%	46,020	12%	243,028	14%
35-44	91,839	15%	122,890	17%	57,904	15%	272,633	16%
45-54	70,905	12%	87,690	12%	45,075	12%	203,670	12%
55-64	41,769	7%	43,486	6%	30,542	8%	115,797	7%
65-74	29,952	5%	25,593	4%	25,699	7%	81,244	5%
75-84	19,269	3%	14,695	2%	16,001	4%	49,965	3%
85+	6,704	1%	4,502	1%	4,044	1%	15,250	1%
Median Household Income	\$25,533 - \$45,127		\$33,084 - \$58,030		\$22,429 - \$34,050			
Proportion with high school diploma or higher (25+ years old)	74.7%		75.8%		75.9%			
Proportion with bachelor's degree or higher (25+ years old)	16.8%		15.5%		10.6%			
Proportion in labor force among persons 16 years and older	63.6%		69.8%		61.3%			
Proportion unemployed among persons 16 years and older	8.4%		6.2%		9.5%			
Total	602,056	35.2%	726,447	42.5%	380,931	22.3%	1,709,434	100%

The Epidemic

The first cases of the acquired immunodeficiency syndrome (AIDS) reported in the United States were described in the June 5, 1981 issue of the *Morbidity and Mortality Weekly Report* (MMWR). Since then, AIDS has emerged as what might be the most significant communicable disease epidemic of the twentieth century, and quite possibly the twenty-first century.

TABLE 3.

Cumulative AIDS cases for selected jurisdictions, 1981-December 31, 2000	
United States	774,467
New York	142,164
California	119,826
Los Angeles County	42,254
San Francisco County	27,870
San Diego County	10,602
Alameda County	8,039
Riverside – San Bernardino counties	6,960
Orange County	5,645
San Jose County	3,140
Sacramento County	3,230
Kern County	1,028

Center for Disease Control and Prevention. *HIV/AIDS Surveillance Report*, 2000;12 (no. 2): [7-11]

Table 3 provides some indication of the impact of the epidemic on the United States, New York, California and selected California counties. The federal government considers Riverside and San Bernardino counties as a single metropolitan area (MA) for the purposes of counting AIDS cases and allocating funds for HIV-related health and support services. The number of cases reported within the Riverside-San Bernardino MA ranks 20th among the 103 MA's recognized by the Centers for Disease Control and Prevention (CDC).

TABLE 4.

Cumulative AIDS Cases for Riverside and San Bernardino Counties, 1983-December 31, 2000		
Riverside County	4,219	61%
San Bernardino County	2,745	39%
Community	2,351	
Institutional	394	
Total	6,964	100%

The cases presented in table 4 are reported by county of residence at diagnosis and do not necessarily reflect the number of people living with AIDS in San Bernardino and Riverside Counties. The 2,745 cases reported by San Bernardino County ranks ninth among the 58 counties in California.

Community AIDS Cases

Community cases are defined as persons with one or more AIDS defining conditions who lived in San Bernardino County at the time of their initial diagnosis. These community case numbers do not include those incarcerated within state prisons or state hospitals.

San Bernardino County reported its first case of AIDS in 1983. Since that time, 2,351 community cases have been reported. From January 1, 2000 to December 31, 2000, 105 cases of AIDS were reported to the local health department.

The age distribution of persons diagnosed with AIDS in San Bernardino County (see table 5) is similar to age distribution in the United States (Centers for Disease Control and Prevention. *HIV/AIDS Surveillance Report*, 2000;12 no. 2: [16]).

TABLE 5.

Community AIDS cases by age group, San Bernardino County, 1983-December 31, 2000		
<5	27	1%
5-12	11	<1%
13-19	17	1%
20-29	449	19%
30-39	1,015	43%
40-49	573	24%
50+	259	11%
Total	2,351	100%

The number of cases among Caucasians in San Bernardino County is 2.4 times that reported among African Americans and 1.8 times that identified among Latinos (see table 6).

TABLE 6.

Community AIDS cases by race/ethnicity, San Bernardino County, 1983-December 31, 2000		
Caucasian	1,175	50%
Latino	643	27%
African American	489	21%
Asian/Pacific Islander*	28	1%
Native American	16	1%
Total	2,351	100%

*8 Filipino, 2 Vietnamese, 1 Chinese, 1 Indonesian, 2 Japanese, 1 Korean, 3 Thai, 2 Tongan, 1 Cambodian, 2 Hawaiian, 5 Unspecified

The racial/ethnic distribution of San Bernardino County community cases differs from that of the United States. Fifty percent of the local cases have occurred among Caucasians while the corresponding proportion for the United States is 43% (Centers for Disease Control and Prevention. *HIV/AIDS Surveillance Report*, 2000;12 no. 2: [16]). Within San Bernardino County, Latinos

have accounted for twenty-seven percent of the community AIDS cases while 18% of the national cases have been reported among this racial/ethnic group. African Americans represent twenty-one percent of the community AIDS cases and 38% of the national cases. Local proportions of Asian/Pacific Islander and Native American cases are similar to national rates.

One thousand nine hundred and seventy-three (84%) of the 2,351 community AIDS cases have occurred among males (see table 7) and 378 (16%) have been female (see table 8). These proportions are comparable to national figures (Centers for Disease Control and Prevention. *HIV/AIDS Surveillance Report*, 2000;12 no. 2: [16]).

The risk profile for San Bernardino County adult/adolescent male community AIDS cases parallels the proportion of cases reported throughout the United States with the exception of the case proportions associated with injection drug use (IDU) or sex between men. Twenty-two percent of the nation's adult male cases have been attributed to IDU alone (Centers for Disease Control and Prevention. *HIV/AIDS Surveillance Report*, 2000;12 no. 2: [14]) compared to 13% in San Bernardino County. Sixty-five percent of the local male cases have been associated with sex between men while 56% of the national male cases have shared the same risk factor.

TABLE 7.

Male community AIDS cases by probable source of infection and race/ethnicity, San Bernardino County, 1983-December 31, 2000							
Probable Source of Infection	Race/Ethnicity					Total	Row %
	Caucasian	Latino	African Am	Asian/Pac	Native Am		
Sex between men	738	333	196	15	8	1,290	65%
Injection drug use	99	86	77	2	0	264	13%
Sex between men/IDU	113	59	34	0	4	210	11%
Heterosexual, partner IDU	18	27	9	0	0	54	3%
Receipt of factor concentrate	21	11	0	4	0	36	2%
Transfusion	16	7	1	1	1	26	1%
Heterosexual, partner HIV+	10	4	10	1	1	26	1%
Perinat. mother IDU	0	0	5	0	0	5	<1%
Perinat. mother sex c IDU	1	0	2	0	0	3	<1%
Perinat. mother sex c HIV+	1	1	0	0	0	2	<1%
Perinat. mother HIV+	0	1	0	0	0	1	<1%
Perinat. mother sex c bisexual	1	0	0	0	0	1	<1%
Perinat. mother transfused	0	1	0	0	0	1	<1%
No history obtained/unknown	16	20	15	2	1	54	3%
Total	1,034	550	349	25	15	1,973	
Column %	52%	28%	18%	1%	1%		100%

TABLE 8.

Female community AIDS cases by probable source of infection and race/ethnicity, San Bernardino County, 1983-December 31, 2000							
Probable Source of Infection	Race/Ethnicity					Total	Row %
	Caucasian	African Am	Latina	Asian	Native Am		
Injection drug use	47	42	33	0	0	122	32%
Heterosexual, partner IDU	27	37	20	1	1	86	23%
Heterosexual, partner HIV+	19	19	8	1	0	47	12%
Transfusion	12	7	13	0	0	32	8%
Heterosexual, partner bisex.	17	3	5	1	0	26	7%
Perinat. mother IDU	3	7	1	0	0	11	3%
Heterosexual, partner homo.	3	3	4	0	0	10	3%
Heterosexual, partner transf.	1	2	1	0	0	4	1%
Perinat. mother sex c IDU	1	0	2	0	0	3	1%
Perinat. mother HIV+	1	1	0	0	0	2	1%
Perinat. mother sex c bisexual	0	0	1	0	0	1	<1%
Perinat. mother sex c HIV+	1	1	0	0	0	2	1%
Perinat. mother transfused	0	0	1	0	0	1	<1%
Receipt of factor concentrate	1	0	0	0	0	1	<1%
No history obtained/unknown	8	18	4	0	0	30	8%
Total	141	140	93	3	1	378	
Column %	37%	37%	25%	1%	<1%		100%

The national and local proportions of male cases associated with sex between men in addition to IDU, heterosexual contact, transfusions, perinatal transmission, and receipt of factor concentrate are similar.

The risk profile for adult/adolescent female community AIDS cases in San Bernardino County is different from that of the United States. Forty-one percent of the nation's female cases have been associated with only IDU as a probable source of infection (Centers for Disease Control and Prevention. *HIV/AIDS Surveillance Report*, 2000;12 no. 2: [15]) compared to 32% of San Bernardino County cases. Forty-six percent of the local female cases have been attributed to heterosexual contact while the corresponding proportion for the nation is 40%. Heterosexual transmission with at least one sex partner identified as an IDU accounted for fifty percent of the county's female cases in contrast to 41% of the nation's female cases with the same risk

factor. The proportion of cases with no identified risk among females is 2.7 times that for males. One possible explanation for this may be that as the number of cases whose probable source of infection is heterosexual contact increases, the likelihood of knowing the risk profile of each partner may decrease. For the purposes of developing prevention education programs and intervention strategies, it is important to recognize that 2,048 (87%) of the 2,351 community cases have been either directly or indirectly associated with sex between men, injection drug use, or both.

While there have been only 33 cases (1% of all community cases) associated with perinatal transmission, they nevertheless are important in light of results from the AIDS Clinical Trial Group Protocol 076 (Connor EM, Sperling RS, Gelber R, et al. Reduction of maternal-infant transmission of human immunodeficiency virus type 1 [HIV-1] with zidovudine treatment. *N Engl J Med* 1994; 331: 1173-80).

TABLE 9.

Community AIDS cases by AIDS defining condition, San Bernardino County, 1983-December 31, 2000		
CD4 Lymphocyte count < 200 cells/mm ³	1,569	35%
Pneumocystis carinii pneumonia	763	17%
Wasting syndrome due to HIV	475	11%
Candidiasis, esophageal	288	6%
Kaposi's sarcoma	228	5%
Mycobacterium avium complex or M. kansasii, disseminated or extrapulmonary	165	4%
HIV encephalopathy (dementia)	158	3%
Cryptococcosis, extrapulmonary	102	2%
Candidiasis, bronchi, trachea, or lungs	88	2%
Cytomegalovirus retinitis (with loss of vision)	83	2%
Herpes simplex: chronic ulcer(s) (>1 month duration)	81	2%
Cytomegalovirus disease (other than in liver, spleen or nodes) onset at >1 month of age	74	2%
Toxoplasmosis of brain, onset at >1 month of age	57	1%
Cryptosporidiosis, chronic intestinal	56	1%
M. tuberculosis, pulmonary	57	1%
Pneumonia, recurrent in a 12 month period	50	1%
Lymphoma, immunoblastic (or equivalent term)	43	1%
M. tuberculosis, disseminated or extrapulmonary	42	1%
Mycobacterium, of other species or unidentified species, disseminated or extrapulmonary	37	1%
Progressive multifocal leukoencephalopathy	20	<1%
Coccidioidomycosis, disseminated or extrapulmonary	14	<1%
Lymphoma, primary in brain	14	<1%
Bacterial infections, multiple or recurrent (including Salmonella septicemia)	13	<1%
Isosporiasis, chronic intestinal (>1 month duration)	12	<1%
Histoplasmosis, disseminated or extrapulmonary	9	<1%
Lymphoma, Burkitt's (or equivalent term)	9	<1%
Carcinoma, invasive cervical	6	<1%
Lymphoid interstitial pneumonia and/or pulmonary lymphoid hyperplasia	5	<1%
Total Reports of Disease	4,518	100%
Total Cases	2,351	

This study demonstrated that zidovudine (ZDV/AZT) therapy during the course of pregnancy has the potential to reduce the rate of perinatal transmission by nearly 70%. In response to these findings, the United States Public Health Service (USPHS) issued interim recommendations in February 1994 that HIV-infected women be informed of the potential benefits and unknown long-term risks of ZDV antiretroviral therapy during pregnancy and the perinatal period (Centers for Disease Control and Prevention. Recommendations of the U.S. Public Health Service task force on the use of zidovudine to reduce perinatal transmission of human immunodeficiency virus. MMWR 1994; 43 [RR-11]: 1-20). The recommendations were specific with regard to CD4 cell count, weeks of gestation and history of antiretroviral therapy. Since then, the introduction of highly active antiretroviral therapy (combination therapy) has resulted in changes in the standard treatment of HIV. Although pregnancy may influence decisions as to the timing and type of therapy, the USPHS has indicated that, "pregnancy is not an adequate reason to defer standard therapy. There are unique considerations regarding use of antiretroviral drugs during pregnancy, including the potential need to alter dosing due to physiologic changes associated with pregnancy, the potential for adverse short or long-term effects on the fetus and newborn, and effectiveness for reducing the risk of perinatal transmission." All health care providers are encouraged to offer culturally, linguistically, and educationally appropriate information and counseling such that infected women can take action to interrupt vertical transmission of HIV.

Providers who serve HIV-infected pregnant women are encouraged to contact the San Bernardino County Department of Public Health at (909) 383-3060, Jane Bork, MD of Loma Linda University Children's Hospital and Medical Center at (909) 558-8626 or Guillermo Valenzuela, MD of Arrowhead Regional Medical

Center Women's Health Services at (909) 580-6320 for assistance/consultation.

The annual number of reported AIDS cases associated with perinatal transmission has declined since 1995 (n=9). In 2000, one case of perinatal transmission was reported.

Table 9 was developed to provide local physicians, pharmacists and health planners with some indication of the conditions accompanying the immune deficiency associated with advanced HIV disease. It is not surprising that there are more AIDS defining events than there are cases, as AIDS patients experience multiple diseases which would individually support a diagnosis of AIDS. In fact, this list under represents the number of AIDS defining conditions because once a case has been reported, physicians are under no obligation to report additional AIDS defining conditions that develop subsequent to the initial diagnosis other than those made reportable in Section 2500, *California Code of Regulations* (coccidioidomycosis, cryptococcosis, cryptosporidiosis, *Salmonella* septicemia, toxoplasmosis, and tuberculosis).

The AIDS case surveillance definition was changed by the CDC in 1985, 1987, 1988 (residency status only) and 1993. The most recent change included CD4 lymphocyte counts <200 cells/mm³. It is interesting to note that this AIDS defining condition became the most frequently reported within 15 months of its implementation.

Table 10 shows the distribution of community AIDS cases by health planning region. The proportion and case distributions differ in that 48% percent of the community AIDS cases have been reported from the East Valley while only 34% of the population resides in that region. Conversely, thirty-five percent of the cases have been reported from the West Valley health-planning region where an additional 44% of the population also resides. In the desert cities/communities, there is 22% of the population where there have been 18% of cases reported.

TABLE 10.

Community AIDS cases by health planning region, San Bernardino County, 1983-December 31, 2000				
Region	Reported Cases	% Cases	2000 Population	% Population
East Valley	1,121	48%	602,056	35%
West Valley	815	35%	726,447	42%
Desert	413	18%	380,931	22%
Homeless	2	<1%	Unknown	Unknown
Total	2,351	100%	1,709,434	100%

TABLE 11.

Community AIDS cases and cumulative incidence rates for cities/communities reporting 10 or more cases, San Bernardino County, 1983-December 31, 2000

Reported Cases		Cumulative Incidence Rate/100,000	
San Bernardino	562	Morongo Valley	518
Ontario	228	Joshua Tree	428
Fontana	180	San Bernardino	303
Rialto	134	Big Bear Lake	239
Rancho Cucamonga	123	Running Springs	234
Redlands	107	Barstow	218
Upland	97	Crestline	196
Chino	89	Big Bear City	190
Victorville	85	Yucca Valley	190
Colton	70	Redlands	168
Hesperia	67	Bloomington	166
Highland	63	Montclair	166
Apple Valley	62	Colton	147
Montclair	55	Lake Arrowhead	146
Barstow	46	Rialto	146
Chino Hills	33	Ontario	144
Bloomington	32	Upland	142
Yucca Valley	32	Fontana	140
Yucaipa	29	Highland	141
Twenty-nine Palms	24	Chino	133
Crestline	20	Victorville	133
Adelanto	19	Apple Valley	114
Joshua Tree	18	Hesperia	107
Big Bear Lake	13	Adelanto	105
Lake Arrowhead	13	Twenty-nine Palms	104
Loma Linda	13	Rancho	96
Phelan	13	Loma Linda	70
Running Springs	12	Yucaipa	70
Big Bear City	11	Chino Hills	49
Morongo Valley	10	Phelan	N/A

* Rates are calculated based on the 2000 Census population data.

Table 11 shows that there are 30 cities/communities within San Bernardino County with ten or more reported cases of AIDS. It is somewhat surprising that Joshua Tree, Big Bear City, Big Bear Lake, Crestline, Morongo Valley and Yucca Valley have high cumulative incidence rates. The incident rate can be found by dividing the number of new cases (or newly reported) by the total population within a specified period of time. However, these findings are based on small numbers of cases and the relatively small populations of these communities.

While reports of AIDS have been widely distributed throughout the county, it has been decided not to publish the number of cases for cities/communities with fewer than ten cases as this might compromise an individual's right to confidentiality. It is not, however, believed that confidentiality is compromised by listing said cities. Therefore, those cities/communities from which at least one, but fewer than ten resident cases have been reported include: Alta Loma, Baker, Big River, Blue Jay, Cedar Glen, Crestpark, Devore, Earp, Erwin Lake, Etiwanda, Fawnskin, Forest Falls, Fort Irwin, Grand Terrace,

Helendale, Hinkley, Landers, Lucerne Valley, Lytle Creek, Mentone, Needles, Newberry Springs, Norton Air Force Base, Pinon Hills, Rimforest, Skyforest, Sugarloaf, Trona, Twin Peaks, Wonder Valley, Wrightwood and Yermo.

The local annual case fatality rates (see table 12) are consistently higher than those for the United States through 1996. There is no reason to believe that HIV is more virulent within San Bernardino County or that the medical care provided within the county is inferior to that of the nation. The observed differences are most likely due to a more aggressive longitudinal surveillance of AIDS cases in San Bernardino County, thereby reducing the number of individuals lost to follow-up. Highly active anti-retroviral therapy (HAART) was introduced in late 1996. This would explain, in part, the observed decline in the annual and cumulative case fatality rates in 1997 and 1998. The 1999 cumulative death rates for San Bernardino County and the nation are comparable. Cumulative AIDS death rates for the nation have not been released for 2000, however the rate did fall for San Bernardino County by two percent from the previous year.

TABLE 12.

Community AIDS case annual and cumulative mortality rates by year of report, San Bernardino County, 1983-December 31, 2000				
Year	Reported Cases	Deaths	Fatality Rate	Cumulative Rate
1983	1	1	100%	100%
1984	6	6	100%	100%
1985	6	6	100%	100%
1986	23	23	100%	100%
1987	78	76	97%	98%
1988	79	72	91%	95%
1989	118	112	95%	95%
1990	114	108	95%	95%
1991	143	133	93%	95%
1992	235	189	80%	90%
1993	342	228	67%	83%
1994	247	143	58%	79%
1995	203	97	48%	75%
1996	182	69	38%	71%
1997	165	52	32%	68%
1998	158	38	24%	64%
1999	129	31	24%	62%
2000	122	27	22%	60%
Total	2,351	1,411		

The data presented in table 13 indicate that there are no proportional differences in the regional distribution of community AIDS cases by gender. This suggests that there should be no difference in the need for gender specific care or support services by health planning region. The proportion of African Americans with AIDS exceeds the corresponding proportion of the general population in each of the health planning regions. This finding would indicate that HIV/AIDS health and support service providers

can reasonably expect to provide proportionately more service to those of African descent than to Caucasians, Latinos, Asian/Pacific Islanders and Native Americans. Caucasians constitute 46% of the AIDS cases who resided in the East Valley at the time of initial diagnosis, 47% in the West Valley, 68% in the desert and 42%, 36% and 63% of the general population, respectively. The proportions of Latinos with AIDS are comparable to the proportions of Latinos in the general population in each of the three health planning regions.

There is a difference in the proportions of men who have sex with men and IDU's with AIDS between the East Valley and the West Valley. A larger proportion (18%) of East Valley cases are associated with IDU when compared with the West Valley (13%). At the same time, the proportion of West Valley cases attributed to sex between men (60%) is greater than that for the East Valley (52%). The distribution of AIDS cases associated with these two risk factors in the desert health planning region is comparable to that of the East Valley. There are no meaningful differences in the regional distribution of community AIDS cases associated with sex between men in addition to IDU, receipt of factor concentrate, transfusion, perinatal transmission or heterosexual contact.

TABLE 13.

Community AIDS cases by health planning region, gender, race/ethnicity and risk profile, San Bernardino County, 1983-December 31, 2000*								
	East Valley		West Valley		Desert		Total	
Male	919	82%	700	86%	353	85%	1,972	84%
Female	202	18%	115	14%	60	15%	377	16%
Total	1,121		815		413		2,349	100%
Caucasian	511	46%	382	47%	281	68%	1,174	50%
Latino	311	28%	277	34%	55	13%	643	27%
African American	279	25%	142	17%	67	16%	488	21%
Asian/Pacific Islander	13	1%	12	1%	3	1%	28	1%
Native American	7	1%	2	<1%	7	2%	16	1%
Sex between men	583	52%	491	60%	216	52%	1,290	55%
Injection Drug Use	206	18%	107	13%	71	17%	384	16%
Heterosexual contact	130	12%	85	10%	38	9%	253	11%
Sex between men/IDU	99	9%	65	8%	46	11%	210	9%
Transfusion	24	2%	23	3%	11	3%	58	2%
Receipt of factor concentrate	25	2%	6	1%	6	1%	37	2%
Perinatal transmission	11	1%	11	1%	11	3%	33	1%
Unknown	43	4%	27	3%	14	3%	84	4%
Column %		48%		35%		18%		

*Two homeless community cases are not included in this table

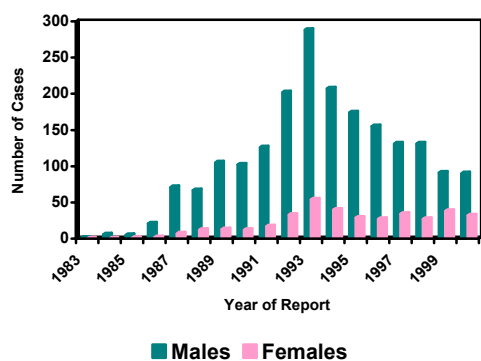


FIGURE 2. Community AIDS cases by gender, San Bernardino County, 1983–December 31, 2000

Figure 2 shows that the number of AIDS diagnoses among males increased most dramatically between 1985 ($n=5$) and 1987 ($n=71$). Between 1988 and 1992, inclusive, the annual number of cases increased from 67 to 202. In 1993, 288 male cases were reported. A substantial number of the 1993 cases were reported as the result of changes in the surveillance case definition. The actual impact of the change will be described later in this report. The annual number of male cases declined to 207 in 1994, 174 in 1995, 155 in 1996, 131 in 1997, remained at 131 in 1998, 91 in 1999 and 90 cases in 2000. The change from 1998 to 2000 represents a 31% decrease in number of reported male cases. From 1993 (when AIDS reporting peaked) to 2000, there was a 69% decrease of reported male cases.

A dramatic increase in the number of cases among women occurred between 1986 ($n=2$) and 1989 ($n=13$). Between 1990 and 1992, inclusive, the annual number of cases increased from 12 to 33. In 1993, 54 female cases were reported. The proportionate increase in 1993 was greater for males (70%) when compared with females (61%). It is important to recognize that the ratio of male to female cases was 5.3:1. The annual number of female cases was 40 in 1994, 29 in 1995, 27 in 1996, 34 in 1997, 27 in 1998, 38 in 1999 and 32 in 2000. This represents a 19% increase from 1998 and 41% fewer cases than were reported in 1993. From 1993 to 2000, there was a 41% decrease in the number of female cases reported.

Figure 3 indicates that the number of AIDS diagnoses among Caucasians increased most dramatically between 1985 ($n=4$) and 1987

($n=54$). Between 1988 and 1992, inclusive, the annual number of cases ranged from 46 to 123. In 1993, 197 cases were reported. The annual number of Caucasian cases was 123 in 1994, 103 in 1995, 77 in 1996, 59 in 1997, 61 in 1998, 49 in 1999 and 43 in 2000. This represents 78% fewer cases than were reported in 1993.

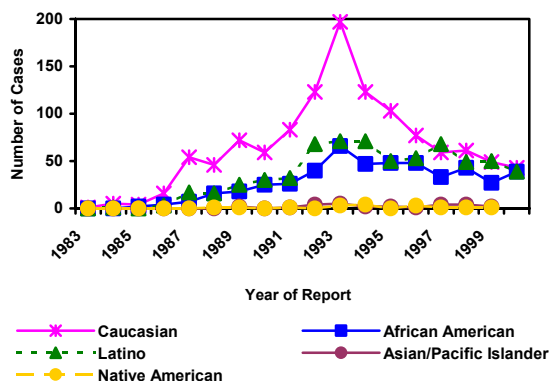


FIGURE 3. Community AIDS cases by racial/ethnic group, San Bernardino County, 1983–December 31, 2000

The first case among Latinos was reported in 1984. The annual number of cases among this racial/ethnic group showed the greatest increase between 1986 ($n=3$) and 1992 ($n=68$). In 1993, 71 cases were reported. The annual number of Latino cases was 71 in 1994, 50 in 1995, 53 in 1996, 68 in 1997, 49 in 1998, 50 in 1999 and 39 in 2000. The last observation represents a 22% decrease from the previous year.

The first two African American cases were reported in 1985. The annual number of cases among this racial group increased most dramatically between 1986 ($n=4$) and 1990 ($n=25$). Twenty-six cases were reported in 1991 and 40 were reported in 1992. In 1993, 66 cases were reported. The annual number of African American cases was 47 in 1994, 48 in 1995, 48 in 1996, 33 in 1997, 43 in 1998, 27 in 1999 and 39 in 2000. The latter represents a 44% increase from the previous year. The first two cases among Asian/Pacific Islanders were reported in 1989. Between 1990 and 1992, inclusive, the annual number of cases ranged from 0 to 4. In 1993, 5 cases were reported. The annual number of Asian/Pacific Islander cases was 2 in 1994, 2 in 1995, 1 in 1996, 4 in 1997, 4 in 1998, 2 in 1999 and 1 in 2000. The first Native American case was reported in 1988. Between 1989 and 1992, inclusive, the annual number of cases ranged from

0 to 1. In 1993, 3 cases were reported. The annual number of Native American cases was 4 in 1994, 0 in 1995, 3 in 1996, 1 in 1997, 1 in 1998, 1 in 1999 and none in 2000.

When evaluating these data, it is important to recognize that the numbers are relatively small, and therefore can vary. Epidemiologically, it is of greater utility to study rates of disease. As mentioned previously, rates are determined by dividing the number of cases in a selected group by the total population for that selected group. In order to obtain the incidence rate (IR), one must divide the number of new cases by the total population for the specified period of time. Rates provide an estimate of risk in a given community.

Figure 4 indicates that the IR of AIDS among Caucasians increased dramatically between 1985 (IR=0.6/100,000) and 1987 (IR=7.2/100,000). Between 1988 and 1992, inclusive, the incidence rate ranged from 5.8/100,000 to 13.6/100,000. In 1993, the incidence rate was 21.7/100,000 based on 197 cases. The rate, in 1994, decreased to 13.6/100,000 (n=123), 11.4/100,000 (n=103) in 1995, 8.5/100,000 (n=77) in 1996, 6.6/100,000 (n=59) in 1997, 6.8/100,000 (n=61) in 1998, 5.4/100,000 (n=49) in 1999 and 4.7/100,000 (n=43) in 2000.

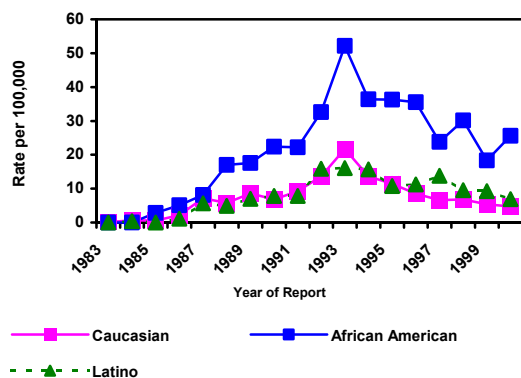


FIGURE 4. Community AIDS case rates/100,000* for selected racial/ethnic groups, San Bernardino County, 1983-December 31, 2000

*Mid-year population estimates for each racial/ethnic group were used to calculate incidence rates

The incidence rate among Latinos increased significantly between 1986 (IR=1.1/100,000; n=3) and 1991 (IR=7.8/100,000; n=32). Between 1992 and 1994, inclusive, the rate remained essentially the same (15.8/100,000). In 1995, the incidence among Latinos was 10.8/100,000 based on 50

cases and was comparable in 1996 (11.2/100,000 based on 53 cases). In 1997, the incidence rate for Latinos was 13.8/100,000 (n=68) and 9.5/100,000 (n=49) in 1998. In 1999 the IR was 9.3/100,000 (n=50) and 6.9/100,000 (n=39) in 2000.

The rate among African Americans has increased dramatically since the first cases from this racial/ethnic group were reported in 1985. The rate increased from 2.8/100,000 in 1985 to 32.6/100,000 in 1992. In 1993, the incidence rate was 52.2/100,000 based on 66 cases and clearly represents the highest rate of disease for any racial/ethnic group in San Bernardino County. The rate among African Americans declined to 36.4/100,000 (n=47) in 1994, and remained stable in 1995 (IR=36.3/100,000; n=48) and 1996 (35.5/100,000; n=48). In 1997, the incidence rate for African Americans was 23.8/100,000 (n=33) and 30.1/100,000 (n=43) for 1998. During 1999, the incidence rate among African Americans was 18.3/100,000 (n=27) and 25.6/100,000 (n=39) in 2000.

In 2000, the rate among African Americans was 5.4 times that for Caucasians and 3.7 times the rate for Latinos. It must be understood that one's racial/ethnic group alone does not place one at increased risk for AIDS or HIV infection. This disease is associated with well-recognized risk behaviors. Since the overwhelming majority of San Bernardino County's male community cases have been associated with men who have sex with men and IDUs (see tables 7 and 8), prevention education activities have been targeted toward those who engage in same. These data do, however, support the need to place special emphasis on African Americans who engage in behaviors that place them at increased risk for HIV infection.

Figure 5 indicates that the first San Bernardino County case associated with sex between men was a Caucasian reported in 1983. It is clear that the number of cases attributable to this behavior increased most dramatically between 1984 (n=5) and 1987 (n=51). Between 1988 and 1992, inclusive, the number of cases ranged from 37 to 137. In 1993, 178 cases were reported. The annual number of cases associated with men who have sex with men was 142 in 1994, 116 in 1995, 100 in 1996, 86 in 1997, 81 in 1998, 57 in 1999 and 51 in 2000. The latter represents an 11%

reduction from the previous year and one of 71% from the peak in 1993.

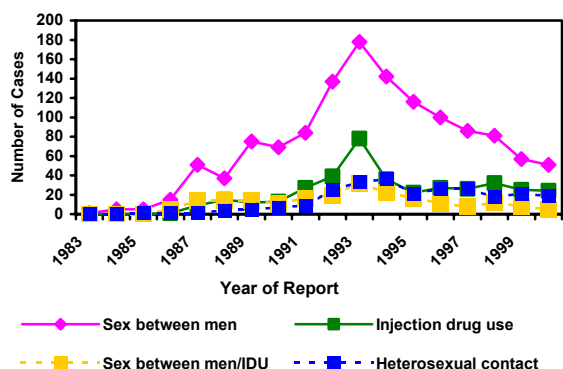


FIGURE 5. Community AIDS cases by probable source of infection, San Bernardino County, 1983-December 31, 2000

The first five cases associated with sex between men in addition to IDU were reported in 1986. Between 1987 and 1992, inclusive, the number of cases remained fairly stable. In 1993, 32 cases were reported. The annual number of cases associated with men who have sex with men in addition to IDU was 22 in 1994, 17 in 1995, 11 in 1996, 8 in 1997, 12 in 1998, 8 in 1999 and 5 in 2000.

It is clear from these data that sex between men remains the most frequently reported risk factor for those diagnosed with an AIDS defining condition in San Bernardino County. These data also suggest that in terms of reported cases associated with these risk factors, the epidemic peaked in 1993.

The first case associated with heterosexual contact was reported in 1985. Between 1986 and 1991, inclusive, the annual number of cases attributable to heterosexual contact was less than 10, and in 1992, twenty-five cases were reported. In 1993, 33 cases were reported. The annual number of cases associated with heterosexual contact was 36 in 1994, 21 in 1995, 26 in 1996, 26 in 1997, 18 in 1998, 21 in 1999 and 19 in 2000.

The first case associated with IDU alone was reported in 1986. This was followed by substantial annual increases in 1987 ($n=9$) and 1988 ($n=15$). Between 1989 and 1992, inclusive, the annual number of cases varied from 12 to 39. In 1993, 78 cases were reported. The annual number of cases associated with IDU alone was

36 in 1994, 22 in 1995, 27 in 1996, 26 in 1997, 32 in 1998, 25 in 1999 and 24 in 2000.

Figure 6 shows that the majority of cases associated with sex between men have occurred among Caucasians. The annual number of cases associated with men who have sex with men increased through 1993. In 1994, the number of cases declined by 35% among Caucasians, 15% among African Americans, and increased by 23% among Latinos. In 1995, the number of cases decreased by 7% among Caucasians, 23% among African Americans, and 28% among Latinos. In 1996, the number of cases declined by 41% among Caucasians, increased by 19% among African Americans, and increased by 18% among Latinos. The number of AIDS cases associated with sex between men declined again for these three racial/ethnic groups in 1997 represented by a 10% decrease among Caucasians, 38% decrease for African Americans and 3% among Latinos. In 1998, the number of reported cases decreased by 13% among Caucasians, increased by 7% for African Americans and decreased by 3% from the previous year among Latino men who have sex with men. In 1999, the number of reported cases had decreased by 27% from 1998 among Caucasians, 50% among African Americans and 19% among Latinos.

As of 2000, sex between men cases decreased by 17% among Caucasians and 35% among Latinos. That same year, rates for African Americans increased by 54%.

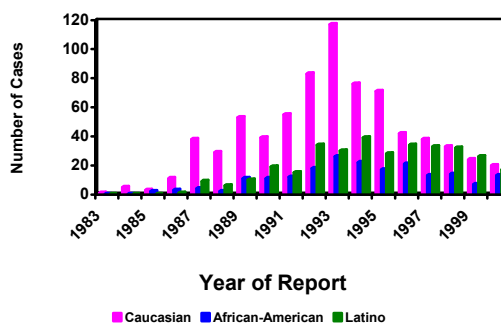


FIGURE 6. Community AIDS cases associated with sex between men by selected racial/ethnic groups, San Bernardino County, 1983-December 31, 2000

Figure 7 indicates that the largest proportion (55%) of cases associated with sex between men in addition to IDU has occurred among

Caucasians. In 1994, the number of cases associated with sex between men in addition to IDU declined by 48% among Caucasians but remained stable among African Americans and Latinos. By 1998, only ten total cases associated with sex between men in addition to IDU were reported; among these selected racial/ethnic groups, eight cases were reported in 1999 and five cases were reported in 2000.

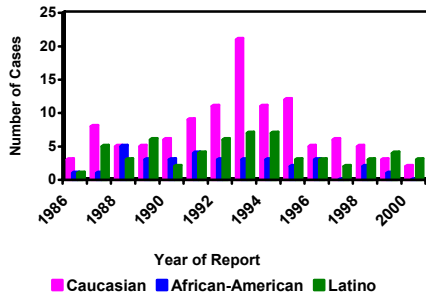


FIGURE 7. Community AIDS cases associated with sex between men and injection drug use by selected racial/ethnic groups, San Bernardino County, 1986–December 31, 2000

Figure 8 shows that the largest proportion of cases among male injection drug users has occurred among Caucasians. The number of cases peaked for these three racial/ethnic groups in 1993. The average annual number of cases ($0=18.4$) for the three racial/ethnic groups under study has remained relatively stable between 1994 and 2000, inclusive.

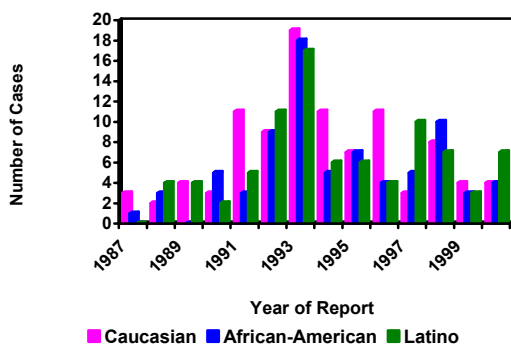


FIGURE 8. Male community AIDS cases associated with injection drug use by selected racial/ethnic groups, San Bernardino County, 1987–December 31, 2000

Figure 9 shows that the number of reported cases peaked for Latina IDUs in 1992, for Caucasian female IDUs in 1993 and for African American injection drug using women in 1994. In 2000, 9

cases of AIDS among women were attributed to IDU.

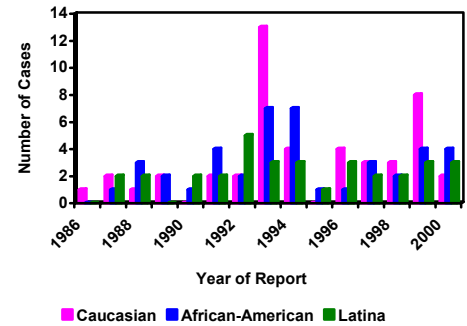


FIGURE 9. Female community AIDS cases associated with injection drug use by selected racial/ethnic groups, San Bernardino County, 1985–December 31, 2000

Figure 10 shows that the largest proportion of female cases associated with heterosexual contact has been among Caucasians. The annual number of cases among heterosexual Latinas and African American women were comparable until 1993. Since then, the total number of cases among Caucasians and African Americans has been comparable with fewer cases being reported among Latinas. In 2000, 12 cases of AIDS among women in the community were associated with heterosexual contact within these racial/ethnic groups. Seven cases of AIDS were reported among the African-American population in 2000; four cases among Caucasians and one among the Latina population in San Bernardino County.

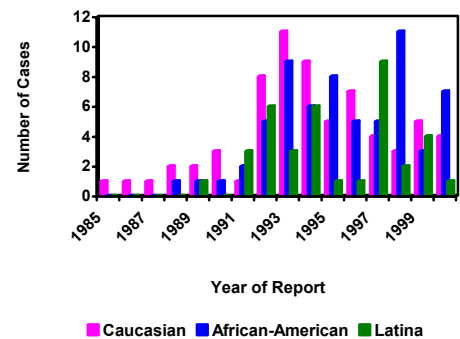


FIGURE 10. Female community AIDS cases associated with heterosexual contact by selected racial/ethnic groups, San Bernardino County, 1985–December 31, 2000

AIDS Cases by Survival Status

Table 14 provides insight into the health and support service needs of persons living with AIDS in San Bernardino County. Changes in the demography of the epidemic can be inferred by comparing relative proportions of the living and the dead. For example, the percentage of those living with AIDS who are female is greater than the proportion of females among those who have died. This presumably reflects increases in heterosexual transmission and injection drug use among women as has been reported elsewhere in the United States. The implication of these data is that HIV-related health and support services must be increasingly sensitive to the unique needs of women living with HIV/AIDS as well as to target messages aimed at preventing continual transmission of the virus.

TABLE 14.

Community AIDS cases by survival status, gender, race/ethnicity, age, and risk profile, San Bernardino County, 1983-December 31, 2000				
	Living		Dead	
Male	757	81%	1,216	86%
Female	183	19%	195	14%
Total	940	100%	1,411	100%
Caucasian	420	45%	755	54%
Latino	283	30%	360	26%
African American	217	23%	272	19%
Asian/Pacific Islander	13	1%	15	1%
Native American	7	1%	9	<1%
<5	11	1%	16	1%
5-12	3	<1%	8	1%
13-19	7	1%	10	1%
20-29	189	20%	261	18%
30-39	428	46%	586	42%
40-49	228	24%	345	24%
50+	74	8%	185	13%
Sex between men	492	52%	798	57%
Injection drug use	138	15%	248	18%
Sex between men/IDU	82	9%	129	9%
Heterosexual contact	135	14%	118	8%
Transfusion	22	2%	36	3%
Receipt of factor conc.	7	1%	30	2%
Perinatal transmission	13	1%	20	1%
Unknown	51	5%	32	2%

The increasing proportion of people of color living with AIDS over time reflects the “changing face” of the epidemic described throughout the nation. The implication for health planners is the increasing need to provide health and support services, which are culturally competent and linguistically appropriate.

The reduced proportion of older persons living with AIDS may be explained by the reduction in the annual number of cases associated with transfusion. Fifty-six (95%) of the 58 transfusion associated cases in San Bernardino County have occurred among adults. Twenty-three (39%) of those were people 50 years of age or older whose risk factor was receipt of a transfusion.

The apparent change in the risk profile of persons living with AIDS is also worthy of discussion. It should not come as a surprise that the number of factor concentrate and transfusion recipients living with AIDS has declined. Routine screening of the blood supply was instituted in the spring of 1985.

This significantly reduced the likelihood of infections associated with the blood supply. The decline in the number of gay and bisexual men living with AIDS probably reflects behavior exhibiting safer sex practices which was initiated within the gay community as early as 1983. The increase in the proportion of heterosexuals living with AIDS also speaks to the changing epidemiology of the disease. It is believed that health planners and providers must use data such as these to better plan to meet the health and support service needs of persons living with HIV/AIDS.

Impact of 1993 Revision of AIDS Surveillance Case Definition

In 1993, the CDC expanded its AIDS surveillance case definition to include pulmonary tuberculosis, invasive cervical carcinoma, recurrent bacterial pneumonia and CD4 lymphocyte counts of less than 200 cells/mm³. These AIDS defining conditions must be accompanied by evidence of HIV infection. One hundred eighty-two (53%) of the 342 community cases reported in San Bernardino County in 1993 would not have been reported were it not for the expansion of the surveillance definition. It is somewhat surprising that the demography and risk profile of the 182 cases meeting only the 1993 changes in the surveillance definition were very similar to those cases that met the 1987 surveillance criteria.

It is believed that 1993 marked the peak for reports of AIDS cases within San Bernardino County. This belief is supported by the apparent completeness of reporting and by the fact that

seroprevalence is declining or is at very low levels across all testing programs. One of the recent changes in the CDC surveillance criteria (CD4 count <200 cells/mm³) became the most frequently reported AIDS defining condition within less than fifteen months.

Estimate of Persons Living with HIV

During the early 1990s, the CDC developed a mathematical model to predict the number of persons living with HIV in a given jurisdiction. The model was based on the number of persons known to be living with AIDS; an estimate of the number of persons infected with HIV but not diagnosed with an AIDS defining illness; and an estimate of the number of people with ≥ 200 CD4 cells/mm³. The AIDS Program's AIDS case registry indicated that there were 940 people living with AIDS in San Bernardino County as of December 31, 2000. After applying the CDC model, it was determined that there are approximately 2,665 persons living with HIV in San Bernardino County (note: only community cases were used in these calculations). This model has since fallen into disfavor among some epidemiologists. In response, the CDC has suggested that the best estimates for persons living with HIV were those developed in 1995. This suggestion is predicated on the facts that the annual rate of new infections has remained stable and HAART has dramatically reduced the mortality rate. According to the April 1996 issue of the *San Bernardino County AIDS Program Report* (Vol XII, No. 2, p13) there were 3,800 persons living with HIV in San Bernardino County in 1995 of which 959 may have since been reported/have developed AIDS, and 314 have died.

These estimates, irrespective of the time period under study, must be interpreted with caution due to the fact that they are based on reported AIDS cases. Not all AIDS cases are reported and the new treatment regimens have slowed the progression from HIV infection to the development of an AIDS defining condition. These developments, coupled with the fact that HIV was not reportable in California during that time, make the generation of accurate estimates challenging.

Years of Potential Life Lost to Age 65

Table 15 indicates that as of December 31, 2000, the HIV epidemic has resulted in 1,411 deaths and 37,160 years of potential life lost for San Bernardino County residents.

TABLE 15.

Years of potential life (YPLL) lost to age 65 among community AIDS cases by age group, San Bernardino County, 1983-December 31, 2000				
Age group	AIDS deaths	2000 Pop.	Avg years to 65	YPLL
<5	16	143,076	62.5	1,000
5-14	9	322,062	55	495
15-24	66	262,709	45	2,970
25-34	495	243,028	35	17,325
35-44	521	272,633	25	13,025
45-54	196	203,670	15	2,940
55-64	81	115,797	5	405
65-74	22	81,244		
75-84	5	49,965		
85+	0	15,250		
Total	1,411	1,709,434		37,160

Economic Impact

There are a number of methods by which to estimate the economic impact of the HIV epidemic. The National Institutes of Health state that in the United States the most common treatment for AIDS is a "cocktail" which can cost up to \$15,000 per patient per year (National Institutes of Health: *Emerging and Re-emerging Infectious Diseases*). Fred Hellinger, PhD of the Division of Cost and Financing, United States Public Health Service estimated that the lifetime cost for providing medical care to one person with HIV was \$119,000. If the assumptions upon which his estimate is based are correct, the epidemic will cost the local health care system at least \$279,769,000 based on the 2,351 community AIDS cases reported within San Bernardino County as of December 31, 2000. It is important to recognize that these costs are for medical care only and do not represent the costs for support services such as case management, mental health counseling, dental care, housing, substance abuse counseling and treatment, home health care, transportation, food services and legal assistance.

A supplemental approach would be to calculate the loss of earning power within the county. It is recognized that all of those with AIDS do not contribute equally to the economic base.

TABLE 16.

Loss of earning power among community AIDS cases by age group, San Bernardino County, 1983-December 31, 2000

Age Group	AIDS Deaths	Avg Years to 65	YPPL	Economic Loss
25-34	495	35	17,325	\$638,876,700
35-44	521	25	13,025	\$480,309,900
45-54	196	15	2,940	\$108,415,440
55-64	81	5	405	\$14,934,780
Total	1,293		33,695	\$1,242,536,820

Table 16 has been calculated on a based median income of \$36,876. If one were to assume that the average person with AIDS would have worked from the age of 25 until 65 at the median annual income, then the economic loss to San Bernardino County based on 1,293 deaths and 33,695 YPLL would be \$1,242,536,820. Regardless of how the impact of the HIV epidemic is estimated (years of potential life lost, cost for medical care, or loss of earning power for the community), at minimum, it can be described as catastrophic. It is incumbent upon all citizens to support primary and secondary prevention education efforts so as to reduce the future social and economic cost of this epidemic.

Figures 11 through 13, inclusive, show maps of reported community AIDS case rates during the first six years, first 11 years and first 17 years of the epidemic in San Bernardino County. Figure 14 shows persons living with AIDS in San Bernardino County by zip code as of December 31, 2000. It is interesting to note that there are no longer AIDS cases in some of the Desert Region zip codes. Regardless, maps such as these are extremely useful to provide visual evidence of the geographic distribution and concentration of reported AIDS cases within San Bernardino County.

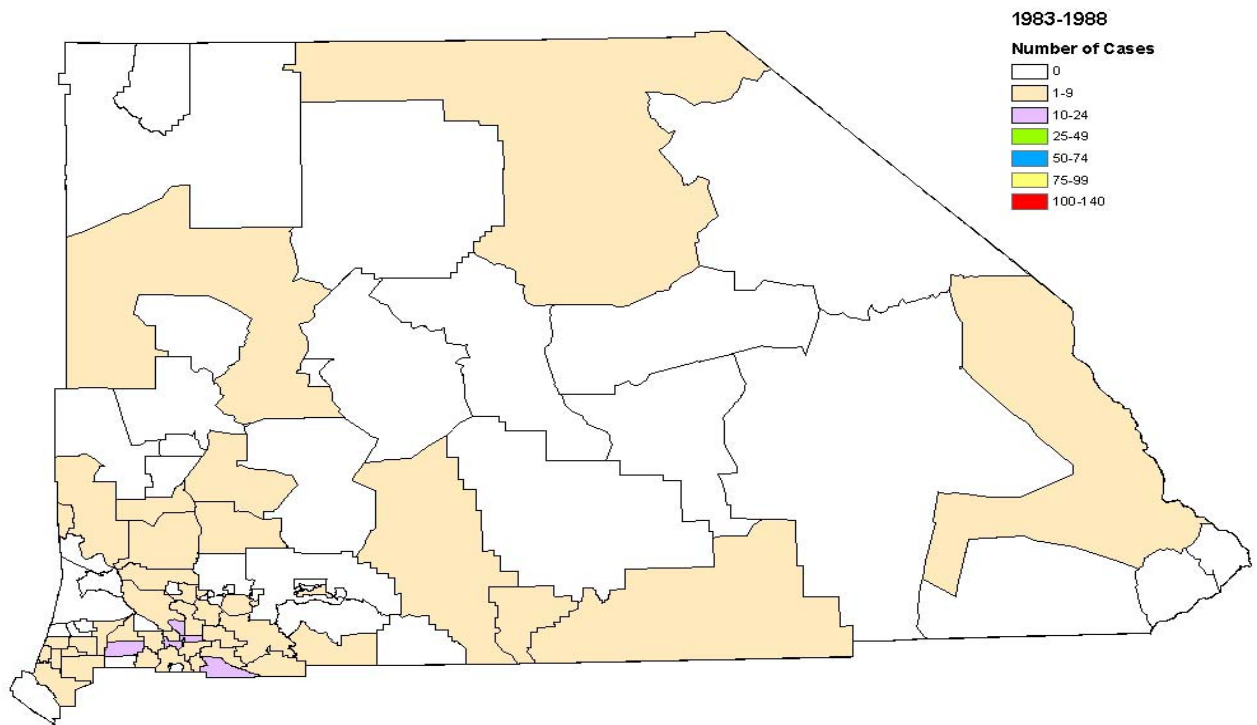


FIGURE 11. AIDS cases by zip code, San Bernardino County, 1983-1988

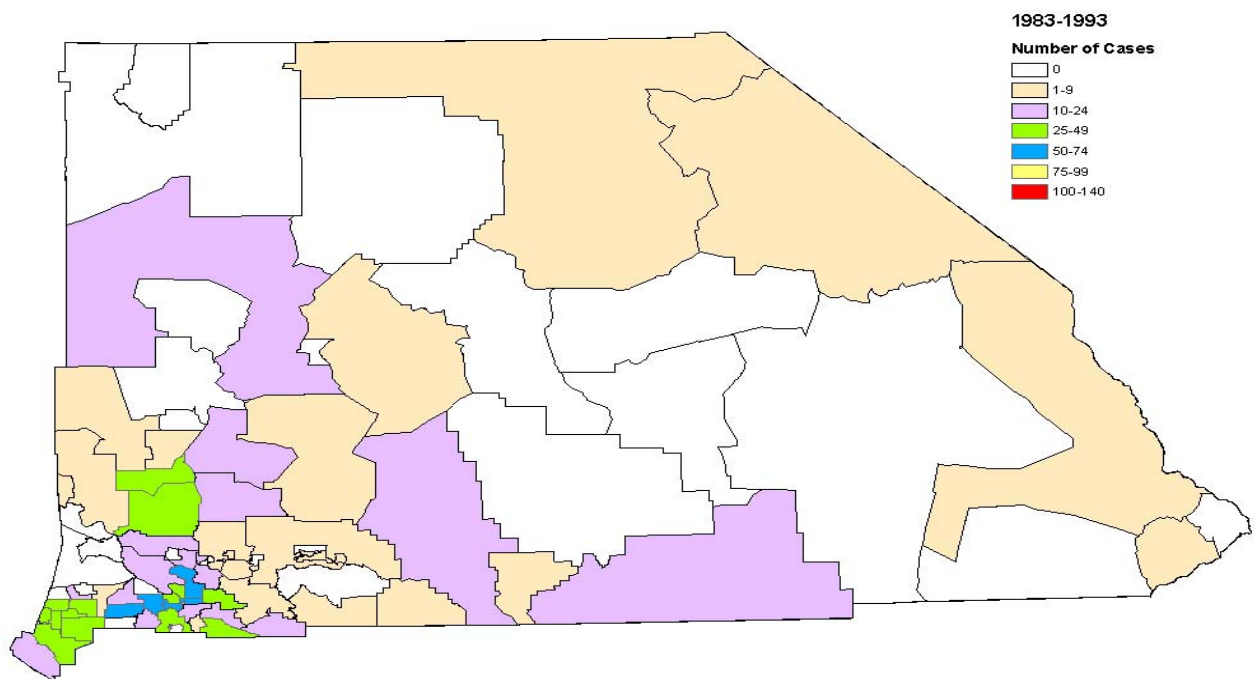


FIGURE 12. AIDS cases by zip code, San Bernardino County, 1983-1993

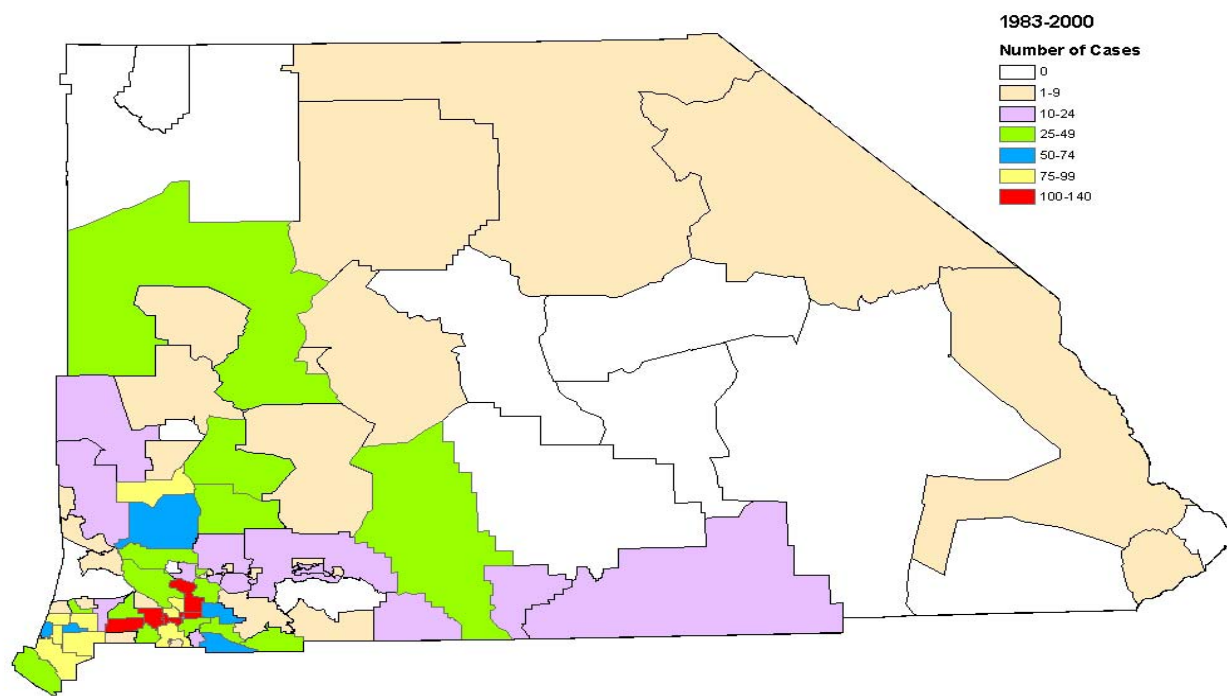


FIGURE 13. AIDS cases by zip code, San Bernardino County, 1983-2000

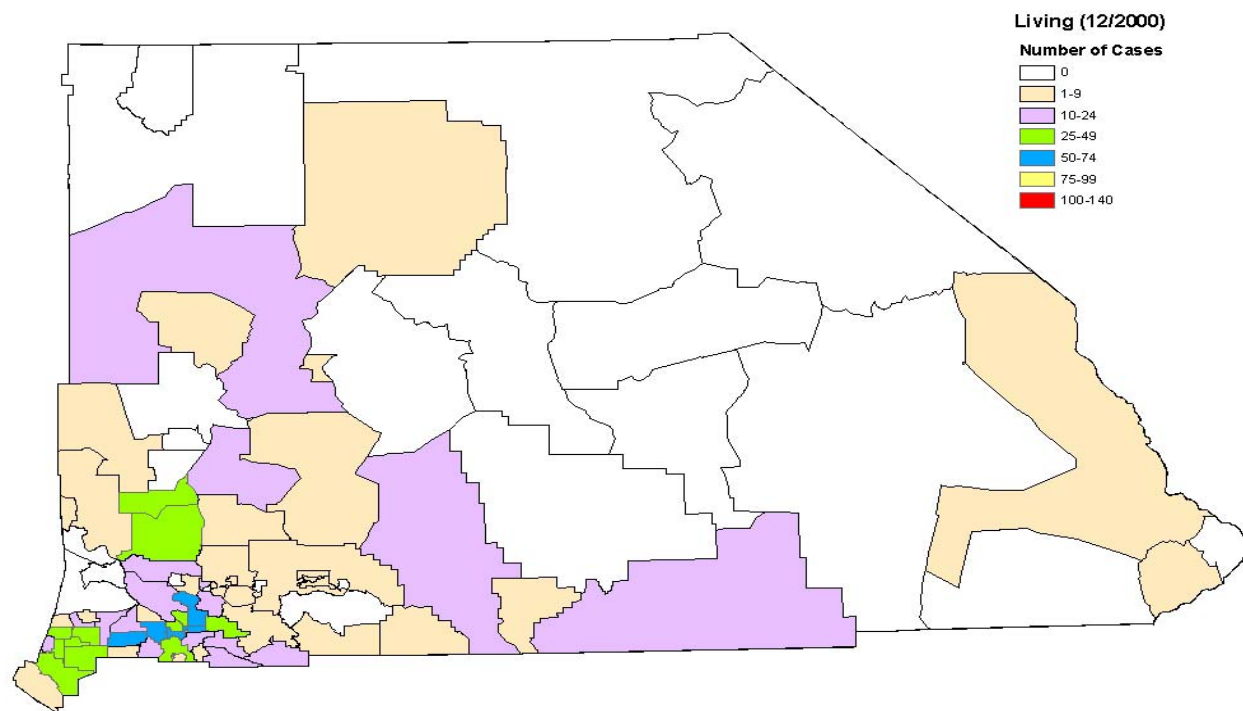


FIGURE 14. Persons living with AIDS by zip code, San Bernardino County, 2000

Institutional Cases

Institutional cases are defined as persons with one or more AIDS defining conditions who were incarcerated in a state prison or hospital at the time of their initial diagnosis.

The California Institution for Men (CIM) in Chino opened its Del Norte facility to HIV-infected inmates in 1987. The majority of inmates assigned to CIM are from Southern California counties. The California Institution for Women (CIW) in Frontera is one of three penitentiaries for women in California with an HIV unit. Patton State Hospital (PSH) is a forensic psychiatric hospital which accepts HIV-infected patients. The total number of institutional cases reported to date is 394 (CIM=344, CIW=32, PSH=18).

TABLE 17.

Institutional AIDS cases by age group, San Bernardino County, 1988-December 31, 2000		
<5	0	0%
5-12	0	0%
13-19	1	<1%
20-29	105	27%
30-39	199	51%
40-49	77	20%
50+	12	3%
Total	394	100%

The age distribution presented in table 18 differs from that of the community cases. One noteworthy similarity is that the frequencies, with the exception of the <5 age category, parallel those community AIDS cases in Table 14. This is not surprising as one would not expect the very old nor the very young to be represented among those incarcerated.

The proportion of incarcerated Caucasians (see table 18) with AIDS (33%) is much lower than that within the community (50%). The proportion of African Americans with AIDS in the prisons (42%) is much higher than that within the community (21%). The proportion of Latinos with AIDS among the incarcerated (23%) is similar to that reported within the community (27%).

TABLE 18.

Institutional AIDS cases by race/ethnicity, San Bernardino County, 1988-December 31, 2000		
African American	165	42%
Caucasian	131	33%
Latino	92	23%
Asian/Pacific Islander*	3	1%
Native American	3	1%
Total	394	100%

*2 Japanese, 1 unspecified

The risk profile for the institutional cases presented in tables 20 and 21 also differs from the community's risk profile. Twenty percent of the institutional cases have been associated with sex between men while 55% of the community cases have shared the same risk factor. Thirty-nine percent of the institutional cases have been attributed to IDU while only 15% of the community cases have been attributed to IDU alone. Thirty-seven percent of the institutional cases have reported sex between men in addition to IDU as their probable source of infection in contrast to 9% of the community cases. Close to three percent of the institutional cases have been associated with heterosexual contact compared to 11% of the community cases.

The distribution of institutional cases by gender also differs from that of the community cases. Ninety-one percent of the institutional cases have occurred among males compared with 83% of the community cases.

TABLE 19.**Male institutional AIDS cases by probable source of infection and race/ethnicity, San Bernardino County, 1988-December 31, 2000**

Probable Source of Infection	Race/Ethnicity					Total	Row%
	African Am.	Caucasian	Latino	Native Am.	Asian/Pac Is.		
Injection drug use	50	40	47	2	1	140	39%
Sex between men/IDU	52	54	24	0	2	132	37%
Sex between men	34	23	12	1	0	70	20%
Heterosexual, partner IDU	5	0	1	0	0	6	2%
Heterosexual, partner HIV+	1	1	0	0	0	2	<1%
No history obtained/unknown	6	0	2	0	0	8	2%
Total	148	118	86	3	3	358	
Column%	41%	33%	24%	1%	1%		100%

TABLE 20.**Female institutional AIDS cases by probable source of infection and race/ethnicity, San Bernardino County, 1988-December 31, 2000**

Probable Source of Infection	Race/Ethnicity					Total	Row%
	African Am.	Caucasian	Latina	Native Am.	Asian/Pac Is.		
Injection drug use	16	12	6	0	0	34	94%
Transfusion	0	1	0	0	0	1	3%
No history obtained/unknown	1	0	0	0	0	1	3%
Total	17	13	6	0	0	36	
Column%	47%	36%	17%	0	0		100%

TABLE 21.**Institutional AIDS case annual and cumulative mortality rates by year of report, San Bernardino County, 1988-December 31, 2000**

Year	Reported Cases	Deaths	Fatality Rate	Cumulative Rate
1988	10	10	100%	100%
1989	51	36	71%	75%
1990	27	24	89%	80%
1991	19	15	79%	79%
1992	23	20	87%	81%
1993	116	68	59%	70%
1994	58	26	45%	65%
1995	41	12	29%	61%
1996	29	8	28%	59%
1997	9	4	44%	58%
1998	3	0	0%	58%
1999	3	1	33%	58%
2000	5	1	20%	57%
Total	394	225		

The annual and cumulative mortality rates for institutionalized cases presented in table 21 are generally lower than those for the community. The observed differences are most likely due to the fact that when inmates are released, the majority are paroled to counties other than San

Bernardino. Such individuals are often lost to follow-up. This problem may be compounded if subsequent death certificates do not contain any reference to HIV or AIDS.

The change in the 1993 surveillance case definition had a similar effect on institutional reporting as it had on community cases. Sixty (52%) of the 116 cases reported in 1993 would not have been reported were it not for the expansion of the surveillance case definition.

Table 22 shows the distribution of AIDS defining illnesses for those incarcerated within CIM, CIW and PSH. The frequency of diagnoses with pulmonary tuberculosis is greater among the institutionalized than within the community (see table 9). The implications for disease control within prisons are clear. Tuberculosis testing, preventive therapy and treatment of active cases must be available to the residents of all institutions.

TABLE 22.

Institutional AIDS cases by AIDS defining condition, San Bernardino County, 1983-December 31, 2000		
CD4 Lymphocyte count < 200 cells/mm3	242	31%
Pneumocystis carinii pneumonia	141	18%
Wasting syndrome due to HIV	94	12%
Mycobacterium tuberculosis, pulmonary	58	7%
Kaposi's sarcoma	34	4%
Candidiasis, esophageal	32	4%
M. tuberculosis, disseminated or extrapulmonary	27	3%
HIV encephalopathy (dementia)	20	3%
Herpes simplex: Chronic ulcer(s) (>1 month duration)	19	2%
Cryptococcosis, extrapulmonary	15	2%
M. avium complex or M. kansasii, disseminated extrapulmonary	18	2%
Candidiasis, bronchi, trachea or lungs	12	2%
Cytomegalovirus disease (other than in liver, spleen or nodes) onset at >1 month of age	12	2%
Coccidioidomycosis, disseminated or extrapulmonary	9	1%
Toxoplasmosis of brain, onset at >1 month of age	9	1%
Cytomegalovirus retinitis (with loss of vision)	6	1%
Lymphoma, immunoblastic (or equivalent term)	6	1%
Carcinoma, invasive cervical	5	1%
Mycobacterium, of other species or unidentified species, disseminated or extrapulmonary	5	1%
Cryptosporidiosis, chronic intestinal	5	1%
Progressive multifocal leukoencephalopathy	3	<1%
Lymphoma, primary brain	2	<1%
Isosporiasis	1	<1%
Pneumonia, recurrent in a 12 month period	1	<1%
Total Reports of Disease (each case may have more than one disease)	776	100%
Total AIDS Cases	394	

Completeness of Reporting

It is believed that the reporting of AIDS cases within San Bernardino County is very accurate. The AIDS Program accesses a number of resources for reports of AIDS/HIV disease. These include:

- Public and Private Hospitals
- Private Physicians and Community Clinics
- Other Health Departments
- Death Certificates
- AIDS Drug Assistance Program
- Tumor and Tuberculosis Registries
- Confidential HIV Antibody Testing Programs
- Blood Bank Screening Programs
- Blinded Seroprevalence Studies
- California Department of Corrections
- California Department of Health Services, Office of AIDS
- Centers for Disease Control and Prevention
- United States Department of Defense

In addition to its local AIDS case registry, the AIDS Program maintains an out-of-county AIDS case registry for people who receive an AIDS diagnosis from a local provider but either reside in another jurisdiction or were previously reported by another jurisdiction (see table 23). Fully, 1,346 (33%) of the 4,091 people receiving an AIDS diagnosis within San Bernardino County through

January 31, 2001 have been allocated to another jurisdiction.

The first reported case of AIDS in San Bernardino County was diagnosed at the UCLA Medical Center. Since then, more than 125 hospitals, clinics, or private medical practices have been credited with making diagnoses of AIDS among San Bernardino County residents.

Table 24 names the facilities where 20 or more cases have been diagnosed.

In 1983, Filemon Quinio, MD diagnosed the first reported case of AIDS in San Bernardino County. Since then, more than 700 others have made diagnoses of AIDS among San Bernardino County residents. Table 25 lists the names of local physicians who have diagnosed 25 or more cases.

The first AIDS case reported in San Bernardino County was investigated by Alexander Taylor, MPH. Since then, more than 60 persons have completed investigations of AIDS diagnoses among San Bernardino County residents. Table 26 includes the names of individuals who have investigated 50 or more cases.

TABLE 23.**AIDS cases by jurisdiction of report, San Bernardino County out-of-county AIDS registry, 1983-Jan. 31, 2001**

Jurisdiction	Cases	Row %
Alabama	1	<1%
Arizona	8	1%
Arkansas	1	<1%
California	1,236	
Los Angeles	519	39%
Riverside	373	28%
Orange	58	4%
San Diego	58	4%
Kern	39	3%
San Francisco	34	3%
San Luis Obispo	18	1%
Long Beach	17	1%
Solano	16	1%
Marin	15	1%
Alameda	8	1%
Monterey	8	1%
Sonoma	8	1%
Kings	7	1%
Sacramento	6	<1%
Tuolumne	6	<1%
Santa Barbara	5	<1%
Contra Costa	4	<1%
Fresno	4	<1%
San Mateo	4	<1%
Ventura	4	<1%
Imperial	3	<1%
Lassen	3	<1%
Santa Clara	3	<1%
Del Norte	2	<1%
Merced	2	<1%
Pasadena	2	<1%
San Joaquin	2	<1%
Tulare	2	<1%
Amador	1	<1%
Butte	1	<1%
El Dorado	1	<1%
Humboldt	1	<1%
Shasta	1	<1%
Stanislaus	1	<1%
Colorado	5	<1%
Connecticut	1	<1%
Florida	7	1%
Georgia	4	<1%
Hawaii	3	<1%
Illinois	4	<1%
Indiana	2	<1%
Kansas	1	<1%
Louisiana	1	<1%
Maine	1	<1%
Massachusetts	2	<1%
Minnesota	2	<1%
Nebraska	1	<1%
Nevada	18	1%
New Jersey	3	<1%
New York	13	1%
Ohio	1	<1%
Oklahoma	3	<1%
Oregon	4	<1%
Pennsylvania	4	<1%
South Carolina	2	<1%
Tennessee	1	<1%
Texas	13	1%
Virginia	1	<1%
Washington	3	<1%
Total	1,346	100%

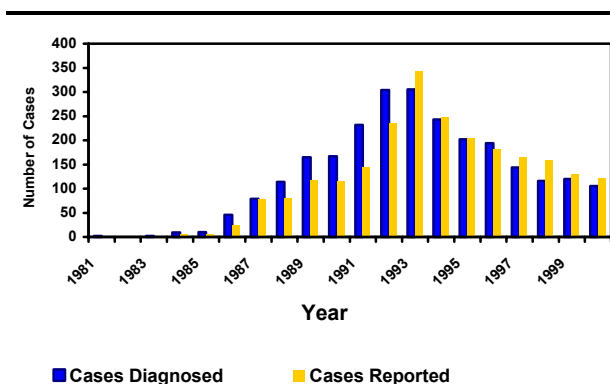
TABLE 24.**Facilities where 20 or more San Bernardino County AIDS cases have been diagnosed, San Bernardino County, 1983-December 31, 2000**

Name	Number	Row %
San Bernardino County HIV Clinics	897	33%
California Institution for Men	304	11%
Arrowhead Regional Medical Center ¹	269	10%
Kaiser Permanente-Fontana	195	7%
Jerry L Pettis Veterans' Medical Center	98	4%
Riverside County Regional Medical Center ²	72	3%
Loma Linda University Medical Center	69	3%
San Antonio Community Hospital	58	2%
St. Bernardine Medical Center	55	2%
Community Hospital of San Bernardino	33	1%
Pomona Valley Hospital Medical Center	25	1%
Redlands Community Hospital	25	1%
Desert AIDS Project HIV Health Center	24	<1%
Victor Valley Community Hospital	24	<1%
Chino Valley Medical Center	22	<1%
More than 115 others	575	22%
Total	2,745	100%

¹ Formerly San Bernardino County Medical Center² Formerly Riverside General Hospital-University Medical Center**TABLE 25.****Physicians who have diagnosed 25 or more cases of AIDS, San Bernardino County, 1983-December 31, 2000**

Name	Num	Row %
Ryan E Zane, MD	297	11%
Herbert Meyer, MD	237	9%
Christian O Christensen, MD	190	7%
Harvey A Elder, MD, MS	86	3%
Bessie Hwang, MD, MPH	74	3%
Herbert A Giese Jr, MD, MPH	70	3%
Daniel P Gluckstein, MD	57	2%
Bruce E Smith, MD, MPH	55	2%
Charles Salemi, MD	45	2%
Richard C Thorsen, MD	44	2%
Richard Morrissey, MD	42	1%
Steven Larson, MD	31	1%
Ahn Nong, MD	29	1%
More than 700 others	1,488	54%
Total	2,745	

Timeliness of reporting has been an important issue since the HIV/AIDS epidemic was first recognized. Figure 15 illustrates AIDS cases by year of diagnosis and year of report within San

**FIGURE 15. AIDS cases by year of diagnosis and year of report, San Bernardino County, 1981-December 31, 2000**

Bernardino County. Prior to 1993, the annual number of cases diagnosed exceeded that which was reported. The expansion of the AIDS surveillance case definition in 1993 allocated diagnoses to prior years but marked the first year where reported cases exceeded diagnoses of AIDS. Since then, the number of reported cases has exceeded the number diagnosed. This is explained by the actual decline in persons diagnosed with AIDS and the identification of previously unreported cases. It is anticipated that this pattern will continue until some endemic level of disease is reached and reporting becomes timely and complete. In all likelihood, the former will be realized before the latter is achieved.

TABLE 26.

Persons investigating 50 or more reported cases of AIDS, San Bernardino County, 1983-December 31, 2000

Name	Number	Percent
Diana Y Liu, MPH	404	15%
Linda L Gier	272	10%
Steven R Wyant	259	9%
Alexander F Taylor, MPH	246	9%
Jon C Sherwin, MPH	234	9%
Kimberly A Poggemeyer, MPH	221	8%
Emmett Resendez	196	7%
Vicki Williams-Loyd	118	4%
Elena O Lingas, MPH	107	4%
Lori M Rodriguez	93	3%
Kimberly S Woods, MPH	88	3%
Cherie D Torquato, RN	82	3%
Kalpna Shah, MPH	73	3%
Maria C Moody, LVN	68	2%
50 Others	284	10%
Total	2,745	

Leading Causes of Death for Persons 25-44 Years of Age

Figure 16 shows that the number of deaths per 100,000 due to HIV/AIDS has advanced from its position as the seventh leading cause of death among males aged 25-44 years in San Bernardino County in 1985 to the second leading cause of death in 1993. It remained the second leading cause of death from 1993 through 1996. There was a dramatic decrease in HIV/AIDS deaths from 1995 to 1997. This is in all likelihood due to the introduction of highly active antiretroviral therapy (HAART). In 1998, the age specific death rate decreased by 71% from the previous year and AIDS declined to the seventh leading cause of death for males aged 25-44 again in 2000. The classification of causes of death changed from International Classification of Disease, Revision 9 (ICD-9) to ICD-10 beginning with deaths in 1999.

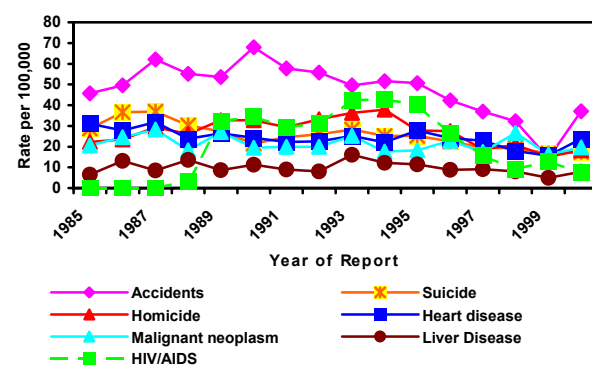


FIGURE 16. Leading causes of death per 100,000 males aged 25-44 years, San Bernardino County, 1985–December 31, 2000

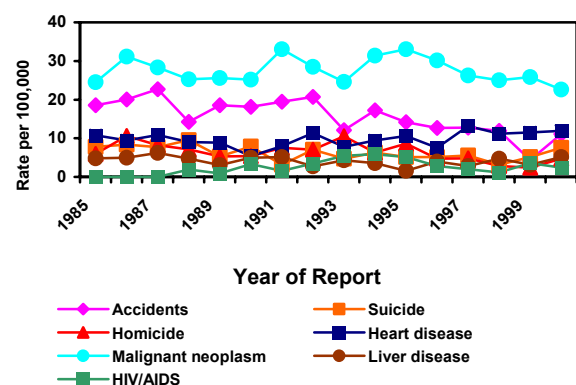


FIGURE 17. Leading causes of death per 100,000 females aged 25-44 years, San Bernardino County, 1985–December 31, 2000

Comparisons by cause of death between 1998 and prior, and 1999 and subsequent should be made with this understanding.

Figure 17 shows that the number of deaths per 100,000 due to HIV/AIDS moved from its position as the seventh leading cause of death among females aged 25-44 years in San Bernardino County in 1985 to the fifth leading cause of death in 1993. Deaths from HIV/AIDS remained fifth from 1993-1995 and was tied with suicide in 1995. From 1996 – 2000, inclusive, deaths from HIV/AIDS dropped to seventh as a leading cause of death. It is important from a public health perspective to recognize that malignant neoplasms, accidents, heart disease, suicide, homicide, drug dependence, cerebrovascular disease and diabetes mellitus all exceed HIV/AIDS as a cause of death for San Bernardino County women aged 25-44 years.

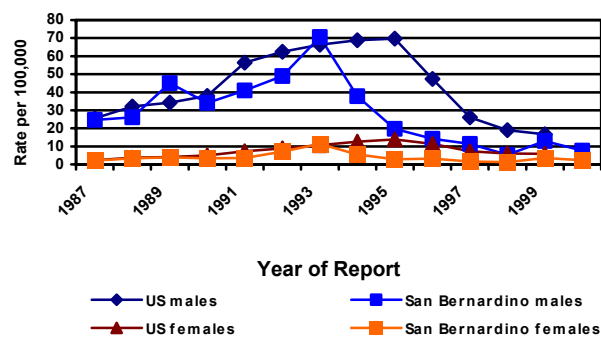


FIGURE 18. AIDS deaths/100,000, aged 25-44 years by gender, San Bernardino County and the United States, 1987-2000

Figure 18 indicates that between 1987 and 1992, inclusive, the HIV/AIDS related death rate per 100,000 United States males aged 25-44 was approximately twice that for San Bernardino County males within the same age group. While the corresponding death rates were much lower for women aged 25-44, the proportional difference between United States and San Bernardino County females approximated that observed among males. Between 1993 and 1997, inclusive, the annual HIV/AIDS related death rate for San Bernardino County males aged 25-44 was approximately 71% of that for United States males within the same age group. The death rate for San Bernardino County females aged 25-44 remained approximately 46% of that for the United States females during the same time frame.

HIV Clinic

The San Bernardino County HIV Clinic offered its first, four-hour block of outpatient medical care in the city of San Bernardino (east valley health planning region) on Thursday, March 29, 1990. Services include, but are not limited to adult and pediatric medical examination, evaluation and treatment; tuberculosis screening and treatment; radiology; laboratory services (including flow cytometry to measure CD4 cell counts, quantitative polymerase chain reaction to measure extracellular viral RNA, HIV-1 genotyping and HIV-1 phenotyping assays for drug resistance); pharmacy and access to the AIDS Drug Assistance Program; referral for biomedical research; referral for treatment or procedures which exceed the clinic's scope of service; referral for dental examination and follow-up care;

psychosocial evaluation and counseling; immunizations; health education, risk reduction and behavior change support; enhanced medication education to promote improved adherence to complex treatment regimens; family planning and maternal health services; nutritional assessment and counseling; WIC vouchers for eligible women and children; substance abuse counseling, treatment, and referral if indicated; and case management for the development of a comprehensive health and support service plan, benefits counseling, and assistance and advocacy in finding needed services. It became readily apparent that four hours of service per week were insufficient to meet the demand for care. The clinic was expanded to eight hours of outpatient care per week beginning on Thursday, June 7, 1990. The AIDS Program was successful in securing Title III(b) funds under the Ryan White Comprehensive AIDS Resources Emergency (CARE) Act of 1990 and added another four hours of clinical services per week beginning Wednesday, October 9, 1991. Beginning on Monday, June 8, 1992 a fourth four-hour block of weekly outpatient care was added using Title III(b) funds. Two, four-hour blocks of services per week were added in Hesperia (desert health planning region) starting on July 2, 1993. Beginning on January 6, 1995, a four-hour block of clinical services per week was added in Chino (west valley health planning region). In response to the growing number of clients entering or re-entering the work force, a two-hour block of evening clinical services was added each week in San Bernardino beginning March 23, 1999.

TABLE 27.

Annual HIV clinic enrollees and visits, San Bernardino County, March 29, 1990-December 31, 2000

Year	New Enrollments Patients per Month	Active Patients	Patient Visits	Visits per Month
1990	274	23	274	1,672
1991	231	19	455	2,917
1992	290	24	607	4,696
1993	238	20	666	4,547
1994	215	18	681	4,959
1995	196	16	649	4,448
1996	194	16	671	3,933
1997	165	14	663	4,025
1998	146	12	674	4,161
1999	178	15	712	4,169
2000	200	17	780	4,299
Total	2,327	0=18	0=621	43,826
				0=336

Between January 1, 2000 and December 31, 2000, 200 new patients were enrolled in the San Bernardino County HIV Clinics. The total

number enrolled to date is 2,327, and there have been 43,826 patient visits since the clinic opened its doors on March 29, 1990.

Table 27 shows that the annual number of new HIV clinic enrollees has varied ($\sigma=212$, $\delta=44.06$) over the first eleven years of service. The number of patient visits increased dramatically between 1990 and 1992, inclusive. It is interesting that while the number of enrollees decreased from 1992 through 1998, the demand for service has remained relatively stable in terms of total visits. There is every reason to believe that the patient population will require increased care per case over the next several years.

In fact, the number of new enrollees and the increasing complexity of care for this disease suggest that even more service will be rendered in the future both because of increasing numbers, as HIV infected persons live longer, and increasing need for follow-up due to life-long adherence to drug regimens.

When examining the data in tables 29-40 it is important to recognize that these clients do not necessarily have an AIDS defining condition. In fact, many are asymptomatic. These data have the distinct advantage of permitting health care providers and planners to assess HIV-infected individuals from an epidemiological, clinical and

laboratory perspective without having to wait for the development of an AIDS defining condition.

Table 28 indicates that sex between men has been the probable source of infection for 1,215 (65%) of the 1,881 male clients who have been enrolled. Tables 29 and 30 indicate five hundred and twelve (22%) of the 2,327 total clients (male/female) attributed their infection to heterosexual contact. IDU alone has been the probable source of infection for 328 (14%) of those under care. Two hundred and seventeen (12%) of the 1,881 male clients have had their infection associated with sex between men in addition to IDU.

Table 30 illustrates that the largest age groups for both sexes are 30-39 (42% males and 43% females) and 40-49 (38% males and 30% females) among the 2,327 total clients.

Table 31 demonstrates that these clinics have attracted patients from throughout Southern California. Of those receiving care, 427 (18%) reside in counties other than San Bernardino. This observation suggests that the clinics are accessible and acceptable to a considerable number of non-San Bernardino County residents. However, it is also known from other sources that many San Bernardino County residents receive their HIV-related care in neighboring jurisdictions.

TABLE 28.

Male HIV clinic clients by race/ethnicity and probable source of infection, San Bernardino County, March 29, 1990-December 31, 2000									
Probable Source of Infection	Race/Ethnicity						Total	Row %	
	Caucasian	Latino	African Am.	Asian/Pac Is	Native Am.	Other			
Sex between men	659	337	189	9	12	9	1,215	65%	
Sex between men/IDU	141	38	31	2	4	1	217	12%	
Heterosexual contact	52	92	68	4	1	2	219	12%	
Injection drug use	95	54	52	1	1	1	204	11%	
Transfusion	7	4	6	1	0	0	18	<1%	
Receipt of factor concentrate	1	2	0	1	0	0	4	<1%	
Perinatal transmission	1	1	0	0	0	0	2	<1%	
History not obtained/unknown	0	0	2	0	0	0	2	<1%	
Total	956	528	348	18	18	13	1,881		
Column %	51%	28%	19%	1%	1%	<1%			100%

TABLE 29.

Female HIV clinic clients by race/ethnicity and probable source of infection, San Bernardino County, March 29, 1990-December 31, 2000									
Probable Source of Infection	Race/Ethnicity						Total	Row %	
	African Am.	Caucasian	Latina	Asian/Pac Is	Native Am.	Other			
Heterosexual contact	132	92	65	2	2	0	293	66%	
Injection drug use	34	62	27	0	1	0	124	28%	
Transfusion	5	4	11	1	0	1	22	5%	
Perinatal transmission	2	3	1	0	0	0	6	1%	
Receipt of factor concentrate	0	1	0	0	0	0	1	<1%	
Total	173	162	104	3	3	1	446		
Column %	39%	36%	23%	<1%	<1%	<1%			100%

TABLE 30.

HIV clinic clients by gender and age group upon admission, San Bernardino County, March 29, 1990-December 31, 2000						
Age	Gender				Total	Row %
	Male	Row %	Female	Row %		
0-9	2	<1%	2	1%	4	<1%
10-19	1	<1%	7	2%	8	<1%
20-29	105	6%	64	14%	169	7%
30-39	787	42%	193	43%	980	42%
40-49	716	38%	133	30%	849	36%
50-59	212	11%	37	8%	249	11%
60+	58	3%	10	2%	68	3%
Total	1,881		446		2,327	
Column %	81%		19%			100%

TABLE 31.

HIV clinic clients by gender and county of residence, San Bernardino County, March 29, 1990-December 31, 2000						
County	Gender				Total	Row %
	Male	Row %	Female	Row %		
San Bernardino	1,508	80%	392	88%	1,900	82%
Riverside	218	12%	33	7%	251	11%
Los Angeles	119	6%	15	3%	134	6%
San Diego	6	<1%	0	0%	6	<1%
Kern	4	<1%	1	<1%	5	<1%
Imperial	2	<1%	0	0%	2	<1%
Orange	6	<1%	0	0%	6	<1%
Alameda	1	<1%	0	0%	1	<1%
Sacramento	1	<1%	0	0%	1	<1%
Santa Barbara	0	0%	1	<1%	1	<1%
Out of State	16	1%	4	1%	20	1%
Total	1,881		446		2,327	
Column %	81%		19%			100%

TABLE 32.

HIV clinic clients by gender and racial/ethnic distribution, San Bernardino County, March 29, 1990-December 31, 2000						
Race/Ethnicity	Gender				Total	Row %
	Male	Row %	Female	Row %		
Caucasian	956	51%	162	36%	1,118	48%
Latino	528	28%	104	23%	632	27%
African American	348	19%	173	39%	521	22%
Asian/Pacific Islander	18	1%	3	1%	21	1%
Native American	18	1%	3	1%	21	1%
Other	13	<1%	1	<1%	14	1%
Total	1,881		446		2,327	
Column %	81%		19%			100%

TABLE 33.

HIV clinic clients by gender and CDC stage on admission, San Bernardino County, March 29, 1990-December 31, 2000						
	Gender				Total	Row %
	Male	Row %	Female	Row %		
Asymptomatic, CD4 ≥ 500	314	17%	106	24%	420	18%
Symptomatic/not AIDS, CD4 ≥ 500	32	2%	14	3%	46	2%
AIDS, CD4 ≥ 500	8	<1%	1	<1%	9	<1%
Asymptomatic, CD4 = 200-499	387	21%	97	22%	484	21%
Symptomatic/not AIDS, CD4 = 200-499	152	8%	38	9%	190	7%
AIDS, CD4 = 200-499	85	5%	17	4%	102	5%
Asymptomatic, CD4 ≤ 199	69	4%	22	5%	91	4%
AIDS, CD4 ≤ 199	831	44%	150	34%	981	43%
Not applicable (< 13 years old)	3	<1%	1	<1%	4	<1%
Total	1,881		446		2,327	
Column %	81%		19%			100%

TABLE 34.

HIV clinic clients by gender and CD4 cell count on admission, San Bernardino County, March 29, 1990-December 31, 2000						
CD4 Count	Gender					
	Male	Row %	Female	Row %	Total	Row %
≤ 200 cells/mm ³	841	45%	151	34%	992	43%
201-500 cells/mm ³	680	36%	172	39%	852	37%
>500 cells/mm ³	360	19%	123	28%	483	21%
Total	1,881		446		2,327	
Column %	81%		19%			100%

Table 32 indicates that 1,118 (48%) of the clients are Caucasian. This distribution is similar to the proportion of Caucasians with AIDS in the community (44%). In addition, male clients under care are more likely to be Caucasian than any other racial/ethnic group.

Table 33 indicates that the males under care are more likely to present with more advanced stages of HIV disease than are females (44% and 34%, respectively). This finding is more likely due to the males having been infected longer than their female counterparts. This may also reflect increased efforts to reach women at risk and offer counseling, testing and primary medical care.

Table 34 suggests that the majority of the patients under care have been infected for some time. Of those tested, 1,844 (79%) qualified for highly active antiretroviral therapy (HAART) based on a CD4 cell count ≤500/mm³ upon admission. It must be understood that levels of extracellular viral RNA are considered in conjunction with CD4 cell counts prior to the initiation of HAART. Further, 992 (43%) qualified for anti-*Pneumocystis* prophylaxis on admission as a result of CD4 cell counts ≤200 cells/mm³. These data show that the males under care are over-represented within the lowest range of CD4 cell counts on admission. This may be due to their having been infected longer than the females served in the clinics. It also suggests that the AIDS Program is finding infected women before they reach advanced states of immunodeficiency. This is important in view of national concerns that HIV disease among women has been neglected.

Table 35 represents baseline measures of extracellular viral RNA in copies/mm³ beginning September 27, 1995. Current recommendations suggest that fewer than 50 copies/mm³ are indicative of successful HAART. Clients with 51-20,000 copies/mm³ are carefully evaluated for HAART. Clients with more than 20,000 copies/mm³ are immediate candidates for

HAART. Further, clients whose symptoms are attributable to HIV are also considered as candidates for HAART. These data would indicate that at least 721 (53%) of the 1,360 clients provided with baseline testing between September 27, 1995 and December 31, 2000 were immediate candidates for HAART.

TABLE 35.

HIV clinic clients by baseline number of copies of extracellular viral RNA/mm³, San Bernardino County, September 27, 1995-December 31, 2000		
Copies of viral RNA	Clients	Row%
0-50	95	7%
51-20,000	544	41%
20,001-100,000	277	21%
100,001+	444	31%
Total	1,360	100%

The client's need for mental health counseling is determined jointly by a licensed mental health professional, the attending physician, and the patient. Table 36 shows that the females under care are more likely to require crisis intervention or ongoing counseling on admission than are male patients. This reveals the need for the continual provision of onsite counseling, which can satisfactorily address women's issues and concerns.

Table 37 shows that the most frequently reported source of referral for clinic patients is word of mouth (22%), which is followed by referrals from private physicians (19%), community AIDS service organizations (17%) and anonymous testing programs (14%). This would suggest that the clinics have a positive reputation among those living with HIV, the private medical community, as well as community-based AIDS service organizations.

Table 38 shows that 1,736 (75%) of the clients were unemployed. Male clients under care are more likely to be employed on a full time basis than are females. It is noteworthy that many of the employed clients eventually become medically unable to work and are forced to quit their jobs.

Table 39 presents the health insurance status for the clinic clients. It is not surprising that given the employment profile of the clients, 1,051 (45%) of the 2,327 have had no medical insurance. Females under care are more likely to be publicly insured than males. This may be explained by the

fact that low-income women with children generally qualify for Medi-Cal benefits regardless of the mother's health status. Seven hundred and fifty-eight (59%) of the 1,276 clients who have had some type of health insurance have been covered by Medi-Cal.

TABLE 36.

HIV clinic clients by gender and counseling need, San Bernardino County, March 29, 1990-December 31, 2000						
Counseling Need	Gender					
	Male	Row %	Female	Row %	Total	Row %
Crisis intervention	907	48%	240	54%	1,147	49%
Ongoing counseling	177	9%	56	13%	233	10%
No immediate need	797	42%	150	34%	947	41%
Total	1,881		446		2,327	
Column %	81%		19%			100%

TABLE 37.

HIV clinic clients by gender and source of referral, San Bernardino County, March 29, 1990-December 31, 2000						
Source of Referral	Gender					
	Male	Row %	Female	Row %	Total	Row %
Word of mouth	411	22%	81	18%	492	22%
Private physician	359	19%	107	24%	466	20%
Community AIDS service organizations	311	17%	52	12%	363	16%
Anonymous test site	267	14%	63	14%	330	15%
Department of Public Health	150	8%	33	7%	183	8%
Correctional facility	90	5%	19	4%	109	3%
Friend/family	55	3%	11	2%	66	3%
Other	46	2%	10	2%	56	3%
Other early intervention program	47	2%	11	2%	58	3%
Other HIV antibody testing program	39	2%	21	5%	60	2%
Advertisement	25	1%	7	2%	32	1%
Drug/alcohol treatment center	12	1%	9	2%	21	1%
Emergency room	17	1%	3	1%	20	1%
Private hospital	19	1%	13	3%	32	1%
Sex partner	23	1%	2	1%	25	1%
Clinical trial	3	<1%	1	<1%	4	<1%
Needle Sharing Partner	1	<1%	0	0%	1	<1%
Public assistance program	6	<1%	3	<1%	9	<1%
Total	1,881		446		2,327	
Column %	81%		19%			100%

TABLE 38.

HIV clinic clients by gender and employment status, San Bernardino County, March 29, 1990-December 31, 2000						
Employment Status	Gender					
	Male	Row %	Female	Row %	Total	Row %
Full-time employment	339	18%	42	9%	381	16%
Part-time employment	147	8%	30	7%	177	8%
Unemployed	1,372	73%	364	82%	1,736	75%
Other	23	1%	10	2%	33	1%
Total	1,881		446		2,327	
Column %	81%		19%			100%

TABLE 39.

HIV clinic clients by gender and health insurance status, San Bernardino County, March 29, 1990-December 31, 2000						
Health Insurance Status	Gender					
	Male	Row %	Female	Row %	Total	Row %
Medi-Cal	510	27%	248	56%	758	33%
Private insurance	228	12%	29	7%	257	11%
Medicare	208	11%	21	5%	229	10%
Other insurance (ie VA, CHAMPUS)	28	1%	4	1%	32	1%
None	907	48%	144	32%	1,051	45%
Total	1,881		446		2,327	
Column %	81%		19%			100%

AIDS Drug Assistance Program

In the fall of 1987, the Department of Public Health elected to participate in the California Department of Health Services, AIDS Drug Assistance Program (ADAP). Initially, only zidovudine was made available to low income

persons living with HIV. Since then, 163 other drugs and drug combinations have been added to the ADAP formulary (see table 40). San Bernardino County has enrolled 1,819 persons into ADAP between 1987 and December 31, 2000, inclusive.

TABLE 40.

AIDS Drug Assistance Program formulary and indications for use, California 2000				
	Generic Name	Trade Name(s)	Date	Indications for Use
1	Abacavir	Ziagen	Dec 1998	Nucleoside analog for HIV, NARTI
2	Acyclovir	Zovirax	Apr 1994	Herpes simplex virus (HSV), Herpes Treatment
3	Albendazole	Albenza	Sep 1998	Anti-helminthic, Microsporidiosis
4	Alitretinoin gel	Panetin Gel	Aug 2000	KS Treatment
5	Alpha interferon	Intron-A, Roferon-A	Mar 1995	Kaposi's sarcoma (KS), hepatitis B, hepatitis C
6	Alprazolam	Xanax	Aug 2000	Antianxiety
7	Amphotericin b	Fungizone	Apr 1994	Fungal infections
8	Amprenavir	Agenerase	Apr 1999	Protease inhibitor
9	Amikacin sulphate	Injection/generic only	Aug 2000	Antibiotic
10	Amitriptyline hydrochloride	Elavil, generic only	Sep 1998	Anti-depressant
11	Amoxicillin trihydrate	Amoxill	Sep 1998	Antibiotic
12	Amphotercin B	Fungizone/injection, oral solution	Aug 2000	Fungal Infections
13	Amprenavir	Agenerase	Aug 2000	Protease Inhibitor
14	Atorvastatin	Lipitor	Aug 1999	Hypolipidemic
15	Atovaquone	Mepron	Apr 1994	Pneumocystis carinii pneumonia (PCP)
16	Azithromycin	Zithromax	Apr 1994	Mycobacterium avium complex (MAC) prophylaxis and treatment
17	Bleomycin sulfate	Blenoxane/injection/generic available	Mar 1995	Lymphoma, advanced KS, Antineoplastic
18	Bupropion hydrochloride	Zyban, Wellbutrin	Sep 1998	Antidepressant & smoking cessation
19	Cephalexin	Keflex	Sep 1998	Antibiotic
20	Cidofovir	Vistide	Apr 1997	Cytomegalovirus (CMV), HSV, genital warts
21	Ciprofloxacin	Cipro/oral, injection for MAC only	Aug 2000	Antibiotic
22	Citalopram hydrbromide	Celexa	Aug 2000	Antidepressant
23	Clarithromycin	Biaxin	Apr 1994	MAC prophylaxis and treatment, upper respiratory infections (URI)
24	Clindamycin	Cleomycin	Nov 1991	PCP prophylaxis and treatment, pelvic inflammatory disease (PID), toxoplasmosis encephalitis
26	Clofazamine	Lamprene	Apr 1994	MAC
27	Clotrimazole	Lotrimin, Mycelex	Apr 1992	Candidiasis
28	Codeine phosphate		Sep 1998	Pain control
29	Codeine	Tylenol w/codeine	Sep 1998	Pain control
30	Codeine phosphate/aspirin	Empirin	Sep 1998	Pain control
31	Codeine sulfate	Oral generic	Sep 1998	Pain control
32	Codeine w/wo ASA, APAP	Oral generic only		Analgesic
33	Cyclophosphamide	Cytoxan	Mar 1995	Neoplasms
34	Dapsone	Avlosulfon	Nov 1991	PCP prophylaxis
35	Daunorubicin, liposomal	DaunoXome	Aug 2000	KS Treatment
36	Delavirdine	Rescriptor	Jul 1997	Non-nucleoside reverse transcriptase inhibitor for HIV
37	Desipramine hydrochloride	Generic	Sep 1998	Anti-depressant
38	Dexamethasone	Decadron, Hexadrol	Mar 1995	Anti-inflammatory
39	Dicloxacillin sodium	Diclox	Sep 1998	Antibiotic
40	Didanosine	DDI, Videx	Nov 1991	Nucleoside analog for HIV
41	Diphenoxylate hydrochloride/Atropine sulfate	Lomotil	Sep 1998	Diarrhea
42	Divalproex sodium/valproic acid	Depakote	Aug 2000	Anticonvulsant
43	Doxorubicin	Ariamycin	Mar 1995	KS and lymphoma
44	Doxycycline hyclate	Oral generic	Sep 1998	Antibiotic
45	Dronabinol	Marinol	Mar 1995	Nausea, vomiting, anorexia
46	Efavirenz	Sustiva	Dec 1998	Non-nucleoside reverse trans inhibitor
47	Epoetin alfa	Epogen, Procrit	Mar 1995	Red blood cell anemia
48	Erythromycin base	Oral generic	Sep 1998	Antibiotic
49	Erythromycin ethylsuccinate	Generic	Sep 1998	Antibiotic
50	Ethambutol	Myambutol	Apr 1994	Mycobacterium tuberculosis (TB), MAC
51	Famcyclovir	Famvir	Aug 2000	Herpes Treatment
52	Famotidine	Prescription strength,	Aug 2000	Gastrointestinal

53	Fenoprofen calcium	Nalfon	Sep 1998	Pain control
54	Fentanyl patch	Duragesic	Sep 1998	Pain control
55	Filgrastim	Neupogen	Mar 1995	White blood cell anemia
56	Fluconazole	Diflucan	Apr 1992	Fungal infections
57	Flucytosine	5FC, Ancobon	Apr 1994	Fungal infections
58	Fluoxetine hydrochloride	Prozac	Sep 1998	Anti-depressant
59	Fomivirsen	Vitravene	Aug 2000	CMV Disease
60	Foscarnet	Foscavir	Apr 1994	CMV retinitis, HSV
61	Gabapentin	Neurontin	Aug 2000	Anticonvulsant
62	Ganciclovir	Cytovene	Nov 1991	CMV retinitis, HSV
63	Gemfibrozil	Lopid	Aug 1999	Hypolipidemic
64	Glipizide	Glucotrol	Aug 2000	Antidiabetic/Insulin Related
65	Hepatitis A Vaccine	Havrix, Vaqta	Aug 2000	Vaccine
66	Hepatitis B virus vaccine	Energix, Recombivax	Sep 1998	Prevention of hepatitis B infection
67	Hydrocodone	Generic	Sep 1998	Pain control
68	Hydrocodone hydrochloride	Oral generic	Sep 1998	Pain control
69	Hydrocodone w/wo APAP	Oral generic only	Aug 2000	Analgesic
70	Hydroxyurea	Hydrea	Apr 1998	Anti-neoplastic, and adjuvant treatment for HIV
71	Ibuprofen-prescription strength	Motrin	Sep 1998	Pain control
72	Ibuprofen/hydrocodone	Vicoprofen	Sep 1998	Pain control
73	Imiquimod	Aldara cream	Aug 2000	HIV Related Conditions
74	Indinavir	Crixivan	Jul 1996	Protease inhibitor for HIV
75	Indomethacin	Indocin	Sep 1998	Anti-inflammatory
76	Interferon Alfacon 1	Infergen	Aug 2000	Hepatitis C
77	Interferon A-2A	Intron A, Roferon-A	Aug 2000	KS Treatment
78	Itraconazole	Sporanox	Mar 1995	Fungal infections
79	Isoniazid	Generic only	Aug 2000	Tuberculosis
80	Isoniazid/rifampkin	Rifamate	Aug 2000	Tuberculosis
81	Ketoconazole	Nizoral	Apr 1992	Fungal infections
82	Ketorolac tromethamine	Toradol/injection only	Aug 2000	Analgesic
83	Ketoprofen	Orudis	Sep 1998	Anti-inflammatory
84	Lamivudine	3TC, Epivir	Apr 1996	Nucleoside analog for HIV
85	Lamivudine/zidovudine	Combivir	Oct 1997	Nucleoside analog for HIV
86	Lamotrigine	Lamictal	Aug 2000	Anticonvulsant
87	Lansoprazole	Prevacid	Aug 2000	Gastrointestinal
88	Leucovorin calcium	Leucovorin	Mar 1995	White blood cell anemia
89	Levorphenol tartrate	Levodromoran	Sep 1998	Pain control
90	Liposomal daunorubicin	DaunoXome	Jul 1997	KS
91	Loperamide hydrochloride	Imodium	Sep 1998	Diarrhea
92	Lorazepam	Oral generic only	Aug 2000	Antianxiety
93	Megestrol acetate	Megace	Mar 1995	Wasting syndrome, anorexia
94	Methadone hydrochloride	Oral generic	Sep 1998	Pain control
95	Metronidazole	Flagyl	Sep 1998	Antibiotic
96	Methotrexate	Reumatrex, Folex	Mar 1995	Neoplasms
97	Metoclopramide	Reglan/generic	Aug 2000	Gastrointestinal
98	Minocycline hydrochloride	Oral generic	Sep 1998	Antibiotic
99	Morphine sulfate	Oral generic	Sep 1998	Pain control
100	Nandrolene	Deca-Durabolin	Aug 2000	Wasting Syndrome
101	Nandrolone decanoate	Decadurobovin	Sep 1998	HIV wasting
102	Nandrolone phenpropionate		Sep 1998	HIV wasting
103	Naproxen	Naprosyn	Sep 1998	Pain control
104	Nefazodone hydrochloride	Serzone	Sep 1998	Anti-depressant
105	Nelfinavir	Viracept	May 1997	Protease inhibitor for HIV
106	Neomycin sulfate	Oral generic	Sep 1998	Topical antibiotic
107	Nevirapine	Viramune	Apr 1997	Non-nucleoside reverse transcriptase inhibitor for HIV
108	Nortriptyline hydrochloride	Pamelor	Sep 1998	Anti-depressant
109	Nystatin	Mycostatin	Nov 1991	Fungal infections
110	Olanzapine	Zyprexa	Aug 2000	Antipsychotic
111	Omeprazole	Prilosec	Aug 2000	Gastrointestinal
112	Opium, tincture of	Paragoric	Sep 1998	Diarrhea
113	Oxandrolone	Oxandrin	Sep 1998	HIV wasting
114	Oxycodone	Oral generic	Sep 1998	Pain control
115	Oxycodone w/wo ASA,APAP	Oral generic only	Aug 2000	Analgesic
116	Oxycodone acetaminophen	Oral generic	Sep 1998	Pain control
117	Oxycodone/aspirin	Oral generic	Sep 1998	Pain control
118	Paclitaxel	Taxol	Sep 1998	Anti-neoplastic (KS)
119	Pancrelipase	Ultras	Aug 2000	Antidiarrheal
120	Paromomycin	Humatin	Apr 1994	Cryptosporidiosis
121	Pentamidine	Nebupent, Pnu-Imune	Aug 2000	Vaccine
122	Pentamidine isethionate	NebuPent, Pentam	Mar 1989	PCP prophylaxis and treatment
123	Paroxetine hydrochloride	Paxil	Sep 1998	Anti-depressant
124	Penicillin V potassium	Oral generic	Sep 1998	Antibiotic
125	Pneumococcal vaccine	Pneumovax	Sep 1998	Pneumococcus protection
126	Pravastatin	Pravachol	Aug 1999	Hypolipidemic
127	Prednisone	DeltaSone, Orasone	Mar 1995	Anti-inflammatory

128	Probenecid	Generic only	Aug 2000	Other related drugs
129	Prochlorperazine	Compazine	Aug 2000	Gastrointestinal
130	Promethazine	Phenergan/oral, suppository	Aug 2000	Gastrointestinal
131	Pyrazinamide	Generic only	Aug 2000	Tuberculosis
132	Pvrimethamine	Daraprim	Nov 1991	Toxoplasmosis
133	Quetiapine fumarate	Seroquel	Aug 2000	Antipsychotic
134	Rantidine HCL	Prescription strength, generic only	Aug 2000	Gastrointestinal
135	Ribavirin	Generic only	Aug 2000	Hepatitis C
136	Ribavirin/interferon alfa 2B	Rebetron	Aug 2000	Hepatitis C
137	Rifabutin	Mycobutin	Apr 1994	MAC prophylaxis and treatment
138	Rifampin	Generic only	Aug 2000	Tuberculosis
139	Risperidone	Risperdal	Aug 2000	Antipsychotic
140	Ritonavir	Norvir	Jul 1996	Protease inhibitor for HIV
141	Rosiglitazone Maleate	Avandia	Aug 2000	Antidiabetic/Insulin Related
142	Saquinavir Mesulate	Invirase, Fortovase	Jul 1996	Protease inhibitor for HIV
143	Sertraline	Zoloft	Sep 1998	Antidepressant
144	Simvastatin	Zocor	Aug 1999	Hypolipidemic
145	Somatropin	Serostim	Oct 1999	Human growth hormone
146	Stavudine	D4T, Zerit	Mar 1995	Nucleoside analog for HIV
147	Sulfadiazine	Microsulton	Nov 1991	Urinary tract infections (UTI), chancroid, trachoma
148	Sulfamethoxazole-trimethoprim	Bactrim, Septra	Nov 1991	PCP prophylaxis and treatment
149	Sulindac	Clinoral	Sep 1998	Pain control
150	Testosterone cypionate	Virilon	Sep 1998	HIV wasting
151	Testosterone enanthate	Delatestryl	Sep 1998	HIV wasting
152	Testosterone propionate		Sep 1998	HIV wasting
153	Tetracycline hydrochloride	Oral generic	Sep 1998	Antibiotic
154	Trazodone hydrochloride	Desyrel	Sep 1998	Anti-depressant
155	Trimethoprim	Proloprim, Trimplex	Mar 1995	UTI
156	Trimetrexate glucuronate	NeuTrexin	Mar 1995	PCP
157	Valacyclovir	Valtrex	Sep 1998	HSV infection
158	Vancomycin hydrochloride	Oral generic	Sep 1998	Antibiotic
159	Venlafaxine hydrochloride	Effexor	Sep 1998	Anti-depressant
160	Vinblastine sulfate	Velban	Mar 1995	Neoplasms
161	Vincristine sulfate	Oncovin	Mar 1995	Neoplasms
162	Zalcitabine	DDC, HIVID	Dec 1993	Nucleoside analog for HIV
163	Zidovudine	ZDB, AZT, Retrovir	Oct 1987	Nucleoside analog for HIV

Table 41 indicates that enrollment in ADAP has remained relatively stable from 1990 to the present. The dramatic change between 1989 and 1990 corresponds with the development and implementation of the San Bernardino County HIV Clinics.

TABLE 41.

ADAP clients by gender and year of enrollment, San Bernardino County, 1987-December 31, 2000					
Year	Male	Female	Total	Row %	
1987	2	0	2	<1%	
1988	64	5	69	4%	
1989	81	7	88	5%	
1990	157	15	172	9%	
1991	91	13	104	6%	
1992	150	24	174	10%	
1993	179	27	206	11%	
1994	116	19	135	7%	
1995	129	10	139	8%	
1996	149	18	167	9%	
1997	141	37	178	10%	
1998	142	30	172	9%	
1999	112	23	135	7%	
2000	58	20	78	4%	
Total	1,571	248	1,819	100%	

The proportions seen in table 42 suggest the use of ADAP among all age groups living with HIV are comparable to those in the community living with HIV (see table 5). Sixty-four percent (n=1,159) of the 1,819 ADAP clients were 20-39 years of age on enrollment, while 62% (n=1,464) of the 2,351 community AIDS cases have been 20-39 years old at the time of diagnosis. The gender distribution of ADAP enrollees is comparable to that for community AIDS cases as well (see table 13).

TABLE 42.

ADAP clients by gender and age on enrollment, San Bernardino County, 1987-December 31, 2000					
Year	Male	Female	Total	Row %	
0-9	0	2	2	<1%	
10-19	4	2	6	<1%	
20-29	288	58	346	19%	
30-39	706	107	813	45%	
40-49	311	36	347	19%	
50-59	71	15	86	5%	
60+	25	2	27	2%	
Unknown	166	26	192	11%	
Total	1,571	248	1,819		
Col%	86%	14%		100%	

The data presented in table 43 indicate that those enrolled in ADAP are representative of the community AIDS cases in terms of race/ethnicity with the exception of African Americans. African Americans constitute 21% of the community AIDS cases and 17% of ADAP clients. The under utilization of ADAP by persons of African descent has been reported elsewhere in the state.

TABLE 43.

ADAP clients by gender and race/ethnicity, San Bernardino County 1987-December 31, 2000				
	Male	Female	Total	Row %
Caucasian	848	96	944	52%
Latino	441	70	511	28%
African American	227	77	304	17%
Native American	13	1	14	1%
Asian/Pacific Islander	10	1	11	1%
Other	10	0	10	1%
Unknown	22	3	25	1%
Total	1,571	248	1,819	
Col %	86%	14%		100%

Table 44 indicates that the local ADAP has served clients from throughout Southern California and parts of Northern California. This may be due to the implementation of distribution of medications that San Bernardino County made available through the mail between 1987 and 1997. The immense size of the county and the reluctance of many pharmacies to participate in ADAP made it necessary to develop an alternative system for service delivery. The use of the United States Postal Service proved to be an acceptable alternative for the distribution of medications.

TABLE 44.

ADAP clients by gender and county of residence, San Bernardino County, 1987-December 31, 2000				
	Male	Female	Total	Row %
San Bernardino	1,283	213	1,496	82%
Los Angeles	143	18	161	9%
Riverside	122	14	136	7%
San Diego	6	1	7	<1%
Sacramento	5	1	6	<1%
Orange	5	0	5	<1%
Imperial	2	0	2	<1%
Kern	1	0	1	<1%
El Dorado	0	1	1	<1%
Sonoma	1	0	1	<1%
Unknown	3	0	3	<1%
Total	1,571	248	1,819	
Col%	86%	14%		100%

In 1997, the California Department of Health Services, Office of AIDS centralized ADAP through a pharmacy benefits management service provider with an existing network of more than

1,500 pharmacies statewide. This provided an immediate improvement in access for persons living with HIV. Since then, the provider has continued to enroll eligible pharmacies into ADAP. Currently, there are more than 3,000 participating pharmacies in California. In addition to increasing access, the centralization of administration has also improved the efficiency of ADAP.

Anonymous HIV Testing Program

The San Bernardino County Department of Public Health established an anonymous HIV antibody counseling and testing program in 1985. Anonymous testing is offered in the cities of San Bernardino, Ontario, Barstow and Hesperia. Service includes an explanation of the test procedure and meaning of the results; recording of demographic variables and risk assessment; provision of information on HIV transmission, prevention, and strategies for behavior change; development of a risk reduction plan; collection of a laboratory specimen; and distribution of condoms and educational materials. All who test positive are offered medical care and support services through the AIDS Program's HIV clinics or they are encouraged to seek care through the private medical community.

Between January 1, 2000 and December 31, 2000, 3,921 specimens were tested anonymously. Of those, 34 (1%) were found to have serologic evidence of HIV infection. It is important to recognize that those individuals found to have positive test results represent HIV infections and not necessarily cases of AIDS. The total number of specimens tested anonymously by the AIDS Program since June 1, 1985 is 59,920 (see table 46).

The data in table 45 indicate that of those presenting for anonymous testing between April 1, 1988 and December 31, 2000, 61% were Caucasian, 23% were Latino, 10% were African American, 3% were Asian/Pacific Islander, <1% were Native American and 2% were classified as "Other" or "Unknown". It is important to acknowledge that these data do not necessarily reflect unduplicated clients. The incidence of HIV infection among specimens submitted by African Americans tested was 2.0 times that for Caucasians and 1.5 times that for Latinos. These

data support the need for increased outreach and prevention education targeted toward African Americans who engage in behaviors that place them at increased risk for HIV infection.

TABLE 45.

Anonymous HIV antibody test results by race/ethnicity, San Bernardino County, April 1, 1988-December 31, 2000			
Race/Ethnicity	Positive	Tested	Rate/100
African American	134	5,568	2.4
Latino	198	12,232	1.6
Caucasian	405	32,938	1.2
Native American	5	407	1.2
Asian/Pacific Is.	10	1,385	0.7
Other/Unknown	26	1,315	2.0
Total	778	53,845	1.4

Table 46 indicates that sex between men and/or IDU were associated with 832 (75%) of the 1,114 infections identified during the entire period of this program. Since histories are obtained at the time of initial testing, these data might underestimate the actual prevalence of these risk behaviors. However, these data do support the continued need for effective outreach to encourage testing for all persons who engage in behaviors which place them at increased risk for HIV infection.

Figure 19 indicates that the seroprevalence among those tested anonymously who reported sex between men as their only risk factor declined gradually from 2% in 1990 to 0.59% in 2000. Although the percentage among this risk group is less than one percent, it still remains the highest risk factor and indicates the continued need to

provide prevention education to men who have sex with men.

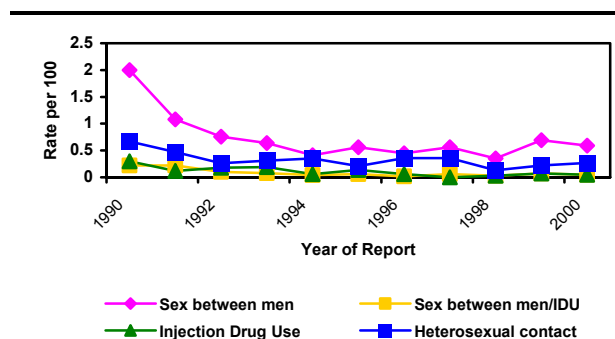


FIGURE 19. Annual HIV seroprevalence by selected risk factors among those presenting to anonymous test sites, San Bernardino County, January 1, 1990-December 31, 2000

The rate of HIV infection among IDUs tested declined from 0.30% in 1990 to 0.06% in 1996. In 1997 there were no infections among this seroprevalence group. Since then, there has been a gradual increase, and in 2000 there were .05% who reported to have histories of injection drug use.

The seroprevalence rate among those who reported sex between men in addition to IDU as risk factors declined from 0.22% in 1990 to .05% in 2000. It is important to note that the sample size is rather small and, as a result, the seroprevalence is subject to considerable variability when infections are identified.

TABLE 46.

Anonymous HIV antibody test results by risk factor, San Bernardino County, June 1, 1985-December 31, 2000			
Risk Factor	Positive	Tested	Rate/100
Receipt of factor concentrate	7	14	50.0
Sex between men/IDU	73	483	15.1
Sex between men	671	7,639	8.8
Injection drug use	88	4,188	2.1
Sex worker	1	117	0.9
Sex partner of a high risk individual	144	18,011	0.8
Transfusion	13	1,549	0.8
Heterosexual with multiple partners	66	20,371	0.3
Occupational exposure	0	639	0.0
No risk stated	36	5,545	0.6
Unknown	15	1,364	1.1
Total	1,114	59,920	1.9

The seroprevalence among those who reported heterosexual contact declined from 0.67% in 1990 to 0.27% in 2000. The rate of infections among this seroprevalence group reached a low of 0.13% infections in 1998.

It is essential to recognize that those presenting for anonymous testing are highly self-selected and have some perception of their personal risk for HIV infection.

Figure 20 indicates that the annual seroprevalence among Caucasians tested anonymously remained stable between 1988 and 1990, inclusive, with an average annual rate of 2.74%. From 1991 to 1993, the seroprevalence declined from 1.93% to 1.03%. The rates for 1994, 1995, 1996, 1997, 1998, 1999 and 2000 were low (1.47%, 1.16%, 1.0%, 0.99%, 0.76%, 1.63% and 1.48%, respectively).

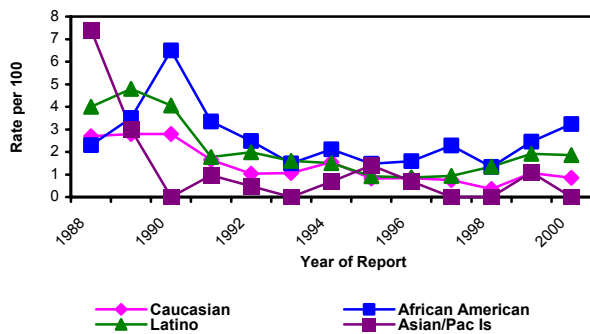


FIGURE 20. Annual HIV seroprevalence by selected racial/ethnic groups among those presenting to anonymous test sites, San Bernardino County, April 1988-December 31, 2000

The seroprevalence among African Americans tested anonymously increased from 2.3% in 1988 to 6.5% in 1990. Between 1990 and 1993, inclusive, the seroprevalence declined from 6.5% to 1.49%. This rate remained relatively stable from 1993 to 1996. In 1997, the rate increased to 2.28%, declined to 1.33% in 1998 and increased to 2.46 and 3.24% in 1999 and 2000, respectively.

The seroprevalence among Latinos tested anonymously peaked at 4.8% in 1989. This was followed by a gradual decline to 0.82% in 1995. Between 1996 and December 31, 2000, the seroprevalence among Latinos remained stable (0.83%, 0.75%, 0.36%, 1.06% and 0.85% respectively).

The seroprevalence among Asian/Pacific Islanders tested anonymously declined from 7.4% in 1988 to 0 in 1990. It is essential to recognize that during that three-year interval, only 101 persons tested self-identified as Asian/Pacific Islander. The average annual seroprevalence for Asian/Pacific Islanders between 1991 and 2000, inclusive, was 0.53%. In 1993, 1997, 1998 and 2000, no new infections were identified among Asian/Pacific Islanders.

Figure 21 shows that there was a dramatic decline in seroprevalence among males between 1985 (18.6%) and 1987 (6.2%). This is probably due to the fact that many of the men with the greatest risk for HIV disease presented for testing in 1985 and 1986. It is noteworthy that the HIV antibody test became widely available in mid-1985. Between 1988 and 1990, inclusive, the average annual seroprevalence among males was 4.8%. Between 1991 and December 31, 2000, inclusive, the average annual seroprevalence among males was 2.19%. While this is interesting, it does not provide the basis for optimism without an assessment of the actual number of infections that were identified. Between 1990 and 1993, inclusive, the average annual number of infections identified among men was 81.0 (standard deviation=17.94). Between 1997 and 2002, inclusive, the average annual number of infections identified among men was 25.3 (standard deviation=5.56). While the variability has declined, there has been a relatively stable average annual number of infections identified among men. From 1997 through 2000, the number of infections among men who were tested anonymously were 29, 20, 31 and 21 respectively.

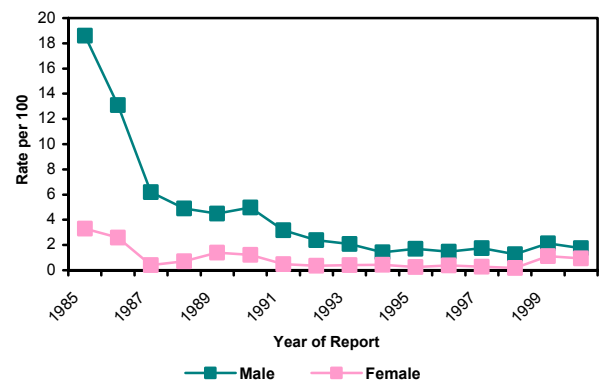


FIGURE 21. Annual HIV seroprevalence by gender among those presenting to anonymous test sites, San Bernardino County, June 1, 1985-December 31, 2000

Between 1985 and 1987, inclusive, female seroprevalence declined from 3.3% to 0.4%. Between 1988 and December 31, 2000, inclusive, the average annual seroprevalence among women was 0.6%. The average annual number of infections identified among women between 1990 and 1993, inclusive, was 13.5 (standard deviation=1.91). The average annual number of infections identified among women between 1997 and 2000 was 7.8 (standard deviation=4.86). From 1997 through 2000, the number of infections among women who were tested anonymously were 5, 3, 13 and 9 respectively.

A number of events are believed to have influenced people's decision to seek anonymous HIV antibody testing. Figure 22 shows increased demand for testing when (A) Rock Hudson died in October 1985; (B) Liberace died in February 1987; (C) Paul Gann announced his transfusion associated infection in June 1987; (D) federal officials announced an aggressive media campaign on AIDS prevention in January 1988; (E) October was declared as AIDS awareness month in October 1991; (F) Magic Johnson disclosed his HIV antibody status in November 1991; and (G) advent of combination therapy in 1996.

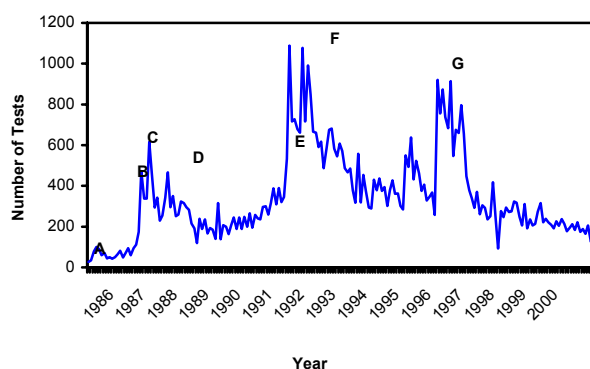


FIGURE 22. Anonymous HIV antibody tests by month, San Bernardino County, June 1, 1985-December 31, 2000

Confidential HIV Testing Programs

In 1985, the San Bernardino County Department of Public Health established a confidential HIV antibody testing program within its sexually transmitted disease (STD) clinics. Confidential testing is offered in the cities of San Bernardino, Ontario, Barstow and Hesperia. Service includes an explanation of the test procedure and interpretation of the results; recording of

demographic variables and risk assessment; provision of information on HIV transmission, prevention, and strategies for behavior change; development of a risk reduction plan; collection of a laboratory specimen; and distribution of condoms and educational materials. All individuals who test positive are offered medical evaluation and support services through the AIDS Program's HIV clinics or they are encouraged to seek care through the private medical community.

Between January 1, 2000 and December 31, 2000, 3,921 specimens were tested confidentially. Of those, eighteen (0.5%) were found to have serologic evidence of HIV infection. It is important to recognize that those individuals found to have positive test results represent HIV infections and not necessarily cases of AIDS. The total number tested confidentially by the AIDS Program since March 1989 is 55,911.

Table 47 shows that the racial/ethnic distribution of those tested confidentially is 36% Caucasian, 35% Latino, 23% African American, 3% Asian/Pacific Islander, <1% Native American and 3% were classified as "Other" or "Unknown". The over representation among people of color when compared with the anonymous testing program reflects current utilization patterns in the Sexually Transmitted Disease (STD) Clinics offered by the Department of Public Health. It is important to recognize that those presenting to the STD Clinics are not expected to be representative of the general population.

TABLE 47.

Confidential HIV antibody test results by race/ethnicity, San Bernardino County, March 1, 1989–December 31, 2000			
Race/Ethnicity	Positive	Tested	Rate/100
Native American	1	245	0.4
African American	71	12,637	0.6
Caucasian	78	19,993	0.4
Latino	83	19,670	0.4
Asian/Pacific Islander	1	1,632	0.1
Other/Unknown	7	1,734	0.4
Total	241	55,911	0.4

Table 48 indicates that sex between men, IDU alone, or sex between men in addition to IDU were associated with 146 (61%) of the 241 infections identified during the entire period of this program. It is interesting that 28 (12%) of the infections were associated with no identifiable risk factor according to the initial interview. This might reflect some reluctance to acknowledge risk behaviors among those presenting for confidential

testing. In 2000, the HIV seroprevalence positives for the anonymous testing program was 7.5 times that of the confidential testing programs. While this difference could suggest some selection bias with respect to testing format based upon perceived risk for HIV infection and ensuring the need for anonymity, it probably indicates that those seeking treatment for STDs do not share the same risk for HIV as those presenting for anonymous testing. This latter hypothesis is supported by the fact that the seroprevalence rates for men who have sex with men and injection drug users are similar regardless of the testing format.

The San Bernardino County Department of Behavioral Health, Alcohol and Drug Services established a confidential HIV antibody testing program in 1989. In 1999, the AIDS Program

became responsible for providing this service to drug treatment facilities throughout the County. Service includes an explanation of the test procedure and meaning of the results; recording of demographic variables and risk assessment; the provision of information on HIV transmission, prevention, and strategies for behavior change; development of a risk reduction plan; collection of a laboratory specimen; and distribution of condoms and educational materials.

One thousand one-hundred sixty-five clients were tested confidentially in methadone and other drug treatment clinics between January 1, 2000 and December 31, 2000. Of those, four (0.003%) were found to have serologic evidence of HIV infection. The total number tested by the Alcohol and Drug Services since September 1989 is 13,746.

TABLE 48.

Confidential HIV antibody test results by risk factor, San Bernardino County, March 1, 1989-December 31, 2000*

Risk Factor	Positive	Tested	Rate/100
Sex between men/IDU	10	129	7.3
Sex between men	95	1,506	6.8
Parent at risk	1	44	2.3
Injection drug use	41	2,925	1.4
Transfusion	3	1,117	0.3
Sex partner of a high risk individual	29	15,010	0.2
Heterosexual with multiple partners	33	23,149	0.1
Occupational exposure	0	247	0.0
Sex worker	1	138	0.7
Receipt of factor concentrate	0	5	0.0
No risk stated	14	7,135	0.2
Unknown	14	4,506	0.3
Total	241	55,911	0.4

*A data collection system similar to that of the anonymous HIV testing program was implemented on March 1, 1989. Previously, confidential HIV testing was offered in San Bernardino County but the data describing same are not available in the current form.

TABLE 49.

Confidential HIV antibody test results by race/ethnicity, San Bernardino County drug treatment centers, March 1, 1989-December 31, 2000			
Race/Ethnicity	Positive	Tested	Rate/100
Asian/Pacific Islander	1	60	1.7
African American	28	1,765	1.6
Latino	22	3,149	0.7
Native American	1	134	0.7
Caucasian	40	8,289	0.5
Other/Unknown	5	349	1.4
Total	97	13,746	0.7

The data in table 49 indicate that of those enrolled in methadone and other drug treatment programs who consented to be tested confidentially, 60% were Caucasian, 23% were Latino, 13% were African American, <1% were Native American, <1% were Asian/Pacific Islander and 3% were classified as "Other" or "Unknown". It must be recognized that persons enrolled in methadone maintenance, detoxification, and other drug treatment programs are not expected to be representative of the general population, nor are they necessarily representative of the total population of IDUs or those with significant non-IDU problems.

Table 50 indicates that among those tested confidentially in drug treatment centers during the entire period of this program, 82 (85%) of the 97 infections identified were associated with injection drug use, sex between men or both.

Figure 23 indicates that between 1998 and 2000, the rates of African Americans have declined to zero for those enrolled in methadone and other

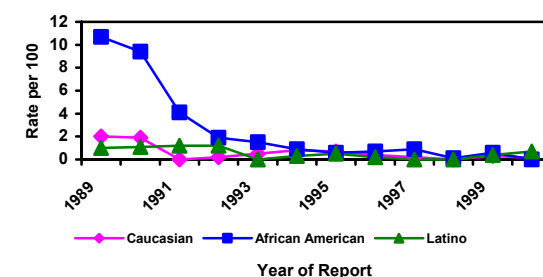


FIGURE 23. Annual HIV seroprevalence by selected racial/ethnic groups among those presenting to confidential test sites, San Bernardino County drug treatment centers, September 1, 1989-December 31, 2000

drug treatment programs, while the Caucasian and Latino populations have increased during this same time frame. It is recognized that this population is highly self-selected and that the annual number tested is relatively small ($N=1,165$). The decline in seroprevalence in 1991 is probably due to the expansion of service to those enrolled in treatment for non-IDU. While non-IDU can clearly compromise one's judgement with regard to practicing safer sex, this behavior is not comparable to the level of risk for HIV associated with injection drug use. Regardless, the seroprevalence rate (0.82%) among those enrolled in drug treatment programs when compared with estimates for those of the general population (0.4%-0.6%) supports the need for effective outreach and referral for all of those enrolled in methadone and other drug treatment programs.

TABLE 50.

Confidential HIV antibody test results by risk factor, San Bernardino County drug treatment centers, March 1, 1989-December 31, 2000			
Risk Factor	Positive	Tested	Rate/100
Sex between men/IDU	10	193	5.2
Sex between men	7	308	2.3
Injection drug use	65	6,116	1.1
Heterosexual with multiple partners	4	1,600	0.3
Sex worker	2	1,025	0.2
Sex partner of a high risk individual	5	3,704	0.1
Occupational exposure	0	64	0.0
Parent at risk	0	2	0.0
Transfusion	0	232	0.0
No risk stated	2	115	1.7
Unknown	2	387	0.5
Total	97	13,746	0.7

Blinded HIV Testing Programs

Survey of County Clinic Clients

In January 1987, the AIDS Program initiated a blinded seroprevalence study to measure rates and monitor trends of HIV infection among those who attended public health clinics or were incarcerated was submitted. Between January 1, 1987 and March 31, 1991, inclusive, 56,734 specimens were collected. Four hundred and forty-two (0.8%) were reported as positive.

Table 51 indicates that 425 (96%) of the 442 infections identified in this study were submitted from the STD Clinic and detention centers. From these data, it would seem important that patients presenting for evaluation for STDs and those incarcerated in county facilities be encouraged to test for HIV either anonymously or confidentially. It is noteworthy that current laws prohibit anonymous testing in jails or prisons.

TABLE 51.

HIV antibody test results by clinic, blinded specimens, San Bernardino County, January 1, 1987-March 31, 1991			
Clinic	Positive	Tested	Rate/100
STD	258	24,393	1.1
Detention centers	167	20,202	0.8
Premarital testing	7	4,288	0.2
Women's Health	9	7,446	0.1
Other	1	405	0.2
Total	442	56,734	0.8

Figure 24 shows that the seroprevalence rate among males tested blindly remained remarkably stable between January 1987 and December 1990, inclusive (mean=1.1%, standard deviation=0.2%). The average annual seroprevalence among females tested blindly was lower (mean=0.4%, standard deviation=0.1%) and showed less variability than that for males. These data are interesting in that the rate of infection among males exceeds that among females by a factor of only 2.8 yet the male to female ratio of community AIDS cases is 5.7:1. These data are important in that they suggest that many persons utilizing STD clinic services do not perceive themselves to be at risk for HIV or are unfamiliar with the benefits of testing and early medical intervention. However, since the majority of infections were identified from two sources, the trends in seroprevalence by gender were essentially flat, resources for testing were limited

in San Bernardino County jails but who elected not to be tested anonymously or confidentially. Since no written or informed consent was obtained to test for antibodies to HIV, specimens collected for purposes of this study were stripped of identifiers with the exception of age, gender and the clinic or facility from which the specimen and there was no method by which to identify and refer the infected individuals identified in this manner for medical care, this blinded study was discontinued effective March 31, 1991.

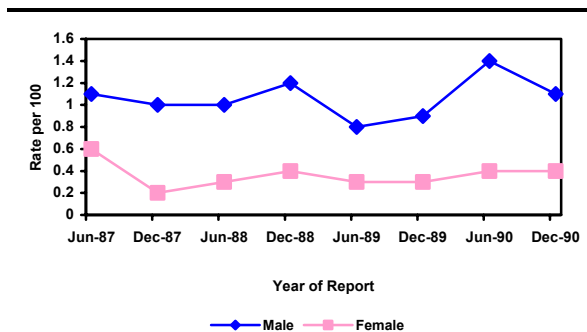


FIGURE 24. HIV seroprevalence by gender by six month interval, blinded specimens, San Bernardino County, January 1, 1987-1990

Survey of Childbearing Women

In 1988, the California Department of Health Services, Office of AIDS implemented a blind seroprevalence study among neonates. The purpose of this study was to provide an estimate of the prevalence of HIV infection among childbearing women in California. Specimens were collected from neonates born in hospitals during the third quarter of each calendar year.

TABLE 52.

HIV antibody test results, survey of childbearing women, San Bernardino County, 1988-1995			
Year	Positive	Tested	Rate/10,000
1988	2	6,991	2.9
1989	3	7,511	4.0
1990	3	7,993	3.8
1991	5	8,329	6.0
1992	2	8,112	2.5
1993	4	8,118	4.9
1994	6	7,603	7.9
1995	5	7,582	6.6
Total	30	62,239	4.8

The specimens were stripped of identifiers other than the mother's age and race/ethnicity and then tested for antibodies to HIV. The data presented in table 52 indicate that very few infants in San Bernardino County were born to HIV-infected

women. It is important to recognize that approximately 25% of children born to mothers with serologic evidence of HIV infection actually have the infection. The remaining 75% represent children with maternal HIV antibodies only. In 1995, 15 counties within California identified between 1 and 40 maternal infections. Among these 15 counties, San Bernardino County had the eighth lowest seroprevalence (0.7%).

HIV Screening Programs

Blood Bank of San Bernardino and Riverside Counties

Table 53 shows that the seroprevalence among blood donors is very low. All HIV-infected people identified in this screening program did not self-exclude from donation on the basis of behaviors known to place them at increased risk for HIV. All 95 infections have been subsequently associated with well-recognized risk behaviors. Since many of the units collected represent repeat donors, this screening program offers an excellent form of sentinel surveillance to identify new or unusual routes of transmission. To date, none have been identified.

TABLE 53.

HIV antibody screening program, Blood Bank of San Bernardino and Riverside Counties, June 1, 1985-December 31, 2000			
Year	Positive	Tested	Rate/10,000
1985	5	35,998	1.4
1986	10	67,591	1.5
1987	10	74,720	1.3
1988	12	75,701	1.6
1989	5	81,168	0.6
1990	10	77,289	1.3
1991	9	82,645	1.1
1992	7	84,145	0.8
1993	4	78,466	0.5
1994	1	79,108	0.1
1995	1	78,744	0.1
1996	5	81,298	0.6
1997	1	82,467	0.1
1998	4	82,516	0.5
1999	5	91,352	0.5
2000	6	98,074	0.6
Total	95	1,251,282	0.8

Military Recruits

The United States Department of Defense began routinely testing military recruits in 1985. The data in table 54 show very low annual seroprevalence rates among recruits from the

Riverside-San Bernardino standard metropolitan statistical area (SMSA). The cumulative seroprevalence for this group is substantially lower than those of the anonymous, confidential, and blinded programs conducted by the Department of Public Health. Nevertheless, the Riverside-San Bernardino Counties SMSA ranks 5th highest among 14 SMSAs surveyed within California in 1995.

TABLE 54.

Military recruit HIV antibody screening program, United States Department of Defense, Riverside-San Bernardino Standard Metropolitan Statistical Area, 1985-1995			
Year	Positive	Tested	Rate/1,000
1985	1	917	1.1
1986	4	3,891	1.0
1987	3	3,736	0.8
1988	3	3,897	0.8
1989	6	4,202	1.4
1990	0	3,562	0.0
1991	2	3,493	0.6
1992	2	3,249	0.1
1993	2	3,386	0.1
1994	0	3,509	0.0
1995	3	3,811	0.1
Total	26	37,653	0.7

Comparison of Testing/Screening Programs

Tables 56 and 57 were prepared to evaluate HIV antibody test results by program and study population using a standard sample (n=10,000) as the denominator. Table 55 indicates that the rate of infection is highest among those presenting to the Department of Public Health for anonymous testing and lowest among those presenting to the Blood Bank of San Bernardino/Riverside Counties.

Table 56 stratifies the test results by study population and indicates that those with the highest risk are recipients of factor concentrate, men who have sex with men and men who have sex with men in addition to IDU who present to the Department of Public Health for anonymous or confidential testing. The second tier of risk includes men who have sex with men and men who have sex with men in addition to IDU who present to the Alcohol and Drug Services and to the Department of Public Health for anonymous or confidential testing. The third stratum includes persons whose only acknowledged risk is IDU and present to the Department of Public Health. The

TABLE 55.**HIV antibody test results by program and interval of study, San Bernardino County, 1985-2000**

Testing Program	Interval of Study	Positive	Tested	Rate/10,000
Anonymous - Public Health	Jun 1, 1985 – Dec 31, 2000	1,114	59,920	185.9
Blinded - Public Health	Jan 1, 1987 - Mar 31, 1999	442	57,225	77.2
Confidential – Office of Alcohol and Drug Programs	Mar 1, 1989 – Dec 31, 2000	97	13,746	70.6
Confidential – Public Health	Mar 1, 1989 – Dec 31, 2000	241	55,911	43.1
Military Recruits – US Dept of Defense	1985-1995	26	37,653	6.9
Childbearing Women - CA Dept of Health Services	1988-1995	30	62,239	4.8
Blood Bank - San Bernardino/Riverside Counties	Jun 1, 1985 - Dec 31, 2000	95	1,251,282	0.8

TABLE 56.**HIV antibody test results by program and study population, San Bernardino County, 1985-December 31, 2000**

Testing Program	Population	Positive	Tested	Rate/10,000
Anonymous - Public Health	Receipt of factor concentrate	7	14	5,000.0
Anonymous - Public Health	Sex between men/IDU	73	483	1,511.4
Confidential - Public Health	Sex between men/IDU	10	104	961.5
Anonymous - Public Health	Sex between men	671	7,639	878.4
Confidential - Public Health	Sex between men	87	1,142	761.8
Confidential - Office of Alcohol and Drug Programs	Sex between men/IDU	10	182	549.5
Confidential - Office of Alcohol and Drug Programs	Sex between men	7	195	359.0
Anonymous - Public Health	Injection drug use	88	4,188	210.1
Confidential - Public Health	Injection drug use	38	2,668	142.4
Confidential - Office of Alcohol and Drug Programs	Injection drug use	61	5,627	108.4
Blinded - Public Health	STD clinic clients	258	24,393	105.8
Blinded - Public Health	Incarcerated	167	20,202	82.7
Anonymous - Public Health	Sex partner of a high risk individual	144	18,011	80.0
Anonymous - Public Health	Heterosexual with multiple partners	66	20,371	32.4
Confidential - Office of Alcohol and Drug Programs	Heterosexual with multiple partners	4	1,417	28.2
Confidential - Office of Alcohol and Drug Programs	Sex partner of a high risk individual	5	3,350	14.9
Confidential - Public Health	Heterosexual with multiple partners	30	21,357	14.0
Confidential - Public Health	Sex partner of a high risk individual	26	21,357	12.2
Blinded - Public Health	Women's health clients	9	7,446	12.1
Confidential - US Dept of Defense	Military recruits	26	37,653	6.9
Blinded - CA Dept of Health Services	Childbearing women	30	62,239	4.8
Confidential – Blood Bank of San Bdn/Riv Counties	Blood donors	95	1,251,282	0.8

fourth tier includes persons whose only acknowledged risk is IDU and present to the Office of Alcohol and Drugs, STD Clinic patients and the incarcerated who were tested in a blinded format and sex partners of high risk individuals who present to the Department of Public Health for anonymous testing. The remaining group largely represents persons with no acknowledged risk other than histories of unprotected heterosexual contact. It is relevant that the highest risk group from the seroprevalence data are recipients of factor concentrates and exceeds the lowest risk group (blood donors) by a factor of 6,250. Regardless, it must be noted that despite the high rate of infection among recipients of factor concentrates, factor VIII concentrate has been free of virus since mid 1992 when the United States Food and Drug Administration approved recombinant technology for the manufacture of factor VIII. Regardless, these findings support the utility of the counseling and testing of persons who engage in well-recognized behaviors that place them at increased risk for HIV as well as persons with little or no risk who donate blood on a regular basis.

Diseases/Conditions of Possible Relevance to the HIV Epidemic

Table 57 indicates that there has been an annual decline in gonorrhea between 1990 and 1996, inclusive. The increase in 1997 and the fact that the number of cases reported in 2000 is the highest in the past six years is of considerable concern to the Department of Public Health. Early syphilis and acute hepatitis B began to decline in 1990 and 1991, respectively. Since chlamydial infections were only made reportable in California in 1989, one should attribute the dramatic rise between 1989 and 1991, inclusive, to recognition and increasing familiarity with reporting requirements. The increase in cases of *Chlamydia trachomatis* between 1996 and 2000, inclusive, is also of considerable concern to the Department of Public Health. The observed declines in sexually and parenterally transmitted diseases is consistent with findings reported elsewhere in the United States. It is not surprising that these diseases with relatively short incubation periods declined in the face of prevention education efforts attendant to the HIV epidemic.

TABLE 57.

Other diseases/conditions of possible relevance to the HIV epidemic, San Bernardino County, 1989-2000

Disease/Condition	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
Gonorrhea	3,455	2,259	1,948	1,314	1,366	1,149	944	824	936	895	738	1,073
1° & 2° Syphilis	172	196	110	38	20	14	26	8	8	7	12	10
C. trachomatis	2,036	2,884	3,636	3,147	3,739	3,513	2,996	2,853	3,561	4,386	4,528	5,137
Hepatitis B (acute)	116	123	96	107	103	86	87	46	37	27	32	21
Tuberculosis	96	115	137	125	151	137	128	131	130	101	113	104
Live births to teens ¹	3,955	4,429	4,507	4,448	4,546	4,534	4,485	4,316	4,128	4,073	4,118	3,872
Rate/1,000 live births and teens	82.7	89.9	90.3	85.4	85.9	83.6	79.8	73.9	68.7	64.7	63.1	57.0
Teen abortions ²	1,096	1,049	1,079	1,055	1,138	1,049	942	856	1,367	1,041	--	--
Rate/1,000 teen abortions	22.9	21.3	21.6	20.3	21.5	19.3	16.8	14.7	22.8	16.5	--	--

¹15-19 years of age, inclusive²Medi-Cal funded abortions only

Tuberculosis, on the other hand, made a resurgence throughout the United States in the early 1990s. This increase was due to a number of factors including, but not limited to, the HIV epidemic, poverty, overcrowding, homelessness, the number of foreign-born persons residing within the United States, insufficient disease control funding at the local level, and the emergence of multi-drug resistant (MDR) strains of *Mycobacterium tuberculosis*. In 1994, tuberculosis began to decline in San Bernardino County. To date, 57 (2%) of the 2,351 community AIDS cases and 58 (15%) of the 394 institutional cases have been diagnosed with active pulmonary tuberculosis.

The number of live births among teenagers increased between 1988 and 1991, inclusive. Since then it has ranged between 4,546 (1993) and 4,073 (1998) live births. However, it is important to note that the birth rate/1,000 teens has declined annually since 1993. The number of Medi-Cal funded abortions peaked in 1993 (n=6,292). However, the rate of teen abortions has remained remarkably stable with the exception of abortions performed in 1995, 1996 and 1998.

There are anecdotal reports of an increased desire among teens to become pregnant and documented evidence of increased sexual activity among very young teens. Regardless, the number of teen pregnancies suggests the continued opportunity for exposure to HIV and other diseases through unprotected sex.

Housing

Riverside and San Bernardino counties became eligible for United States Department of Housing

and Urban Development (HUD), Housing Opportunities for Persons with AIDS (HOPWA) funds in 1993. The City of Riverside was named as grantee by HUD because it had the largest population of any city within the two-county region. The housing authorities in the respective counties agreed to serve as project sponsors. The City of Riverside convened an advisory committee to assist in the planning of the method by which HOPWA funds would be distributed and the service categories that would be funded. Initial services for San Bernardino County residents living with HIV included housing and utilities assistance, case management, home health care and outpatient primary medical care.

In late 1993, Riverside and San Bernardino counties became eligible for Title I funds under the Ryan White Comprehensive AIDS Resources Emergency (CARE) Act of 1990. These funds were able to sufficiently support case management, home health care and primary medical care in San Bernardino County such that all of the HOPWA funds could be used for housing acquisition, rehabilitation and development as well as housing and utilities assistance.

Between 1993 and 1997, inclusive, there were a number of delays in executing contracts for HOPWA-related services. On February 14, 1997, the City of Riverside named the Department of Public Health in San Bernardino as the project sponsor for San Bernardino County effective April 1, 1997.

Six hundred and fifty-four persons living with HIV/AIDS received HOPWA benefits between April 1, 1997 and December 31, 2000. According to the San Bernardino County AIDS case registry,

there were 1,093 persons living with AIDS in San Bernardino County as of December 31, 2000 (see table 14).

TABLE 58.

HOPWA beneficiaries by age group and gender, San Bernardino County, April 1, 1997-December 31, 2000				
Age	Male	Female	Total	Row %
≤17	5	2	7	1%
18-30	64	43	107	16%
31-50	381	103	484	74%
51+	45	11	56	9%
Total	495	159	654	100%
Column %	76%	24%		

TABLE 59.

HOPWA beneficiaries by race/ethnicity, San Bernardino County, April 1, 1997-December 31, 2000			
Race/Ethnicity	Number	Row %	
Caucasian	300	46%	
African American	190	29%	
Hispanic	158	24%	
Asian/Pacific Islander	3	<1%	
Native American	3	<1%	
Total	654	100%	

Those receiving assistance under HOPWA are not representative of those living with AIDS in San Bernardino County in terms of age or gender (see table 58). Persons aged 30 years and under constitute 17% of the HOPWA recipients but 28% of the 1,093 persons living with AIDS. This observation is somewhat surprising in that younger people tend to be over represented among those living in poverty. Persons aged 31 to 50 comprise 74% of the HOPWA beneficiaries compared to 66% of those living with AIDS. The proportion of HOPWA recipients 51 years of age or older is comparable to that of those living with AIDS.

Females constitute 18% of those living with AIDS but 24% of those receiving assistance under HOPWA. This observation is, in all likelihood, due to the fact that women are over-represented among those living in poverty in the United States.

The proportions of Caucasians (46%), African Americans (29%), Hispanics (24%), Asian/Pacific Islanders (<1%) and Native Americans (<1%)

TABLE 60.

HOPWA beneficiaries by monthly income, San Bernardino County, April 1, 1997-December 31, 2000						
	\$0-250	\$251-500	\$501-1,000	\$1,001-1,500	\$1,501-2,000	\$2,001+
Number	128	39	386	68	22	11
Column %	20%	6%	59%	10%	3%	2%

receiving HOPWA benefits (see table 59) are comparable to the corresponding proportions (43%, 26%, 29%, <1% and <1%, respectively) living with AIDS in San Bernardino County. The 2000 median household income for San Bernardino County residents was \$42,066 (2000 Census). The data presented in table 60 indicate that \$501-\$1,000 per month was the most frequently reported income (n=386; 59%) among the HOPWA beneficiaries between 1997 and 2000. The average annual income among the HOPWA recipients in San Bernardino County was \$9,684 with a range of \$0 to \$35,748 and a median of \$8,112. One hundred and seven (16%) of the 654 had no income at all.

One of the stated goals of HOPWA is to prevent homelessness. Homelessness was a documented problem for 116 (18%) of the 654 who received benefits (see table 61). These individuals were placed in hotels/motels on an emergency basis because they had no other options for housing. These data do not measure the "threat of homelessness". However, since the median annual income of those served was \$8,112, the threat of homelessness must be considered "real" for at least half of this population.

Two hundred and sixty-eight (41%) of the 654 shared their residence with one or more persons. The data presented in table 62 suggest that at least 522 persons who were not necessarily living with HIV or eligible for this program, benefited from the housing and utility assistance provided through HOPWA. The average household size for those who lived with others was 2 persons.

The data presented in table 63 indicate that 1,892.31 (81%) of the 2,334.81 months of housing and utilities assistance were provided to those residing in one or two bedroom or single room occupancy (SRO) dwellings. This presumably reflects the fact that most recipients of HOPWA benefits are either living in apartments or relatively small homes.

TABLE 61.

HOPWA beneficiaries by recent living situation, San Bernardino County, April 1, 1997-December 31, 2000		
	Number	Row %
Homeless	116	18%
Rental Assistance	391	60%
Utilities Assistance	147	22%
Total	654	100%

TABLE 62.

Number of persons assisted by HOPWA, San Bernardino County, April 1, 1997-December 31, 2000	
Number of persons with HIV/AIDS	654
Number of others who shared living quarters	522
Total	1,176

TABLE 63.

Units (months) of service by type of assistance and number of bedrooms, April 1, 1997-December 31, 2000							
# of Bedrooms	SRO	1	2	3	4	5+	Total
Rental	111.8*	662.75	453.88	239.75	33.0	3.50	1,511.68
Utilities		296.00	367.88	145.00	11.0	3.25	823.13
Total	111.8	958.75	821.76	384.75	44.0	6.75	2,334.81
Column %	5%	41%	35%	16%	2%	<1%	

* 3,354 days of hotel/motel assistance

There has been considerable discussion among the members of the Inland Empire HIV Planning Council regarding clients who seek services from more than one provider. While most of the discussions have focused on case management, table 64 provides some insight into the utilization of housing and utilities assistance.

Unduplicated clients are defined as those who have sought and received assistance from one provider while "shared" clients are those who have received assistance from more than one provider. It is not known why some would seek service from more than one provider. Possible explanations include a change of residence from one agency's service area to that of another; limited cash flow on the part of a given provider; lack of confidence in the "system" on the part of consumers; or the exhaustion of benefits available through a given agency.

The data presented in table 64 indicate that 514 (79%) of the 654 who received housing and utility assistance between April 1, 1997 and December 31, 2000 obtained same from only one service provider. The Inland AIDS Project served 349 (68%) of the unduplicated, non-shared clients, the Foothill AIDS Project assisted 84 (16%), the Desert AIDS Project served 42 (8%) and Catholic Charities served 39 (8%). One hundred and

thirty-seven (21%) of the 654 unduplicated clients obtained assistance from two or more providers.

TABLE 64.

Unduplicated and "shared" HOPWA beneficiaries by service provider, San Bernardino County, April 1, 1997-December 31, 2000					
	Catholic Charities	Desert AIDS Project	Foothill AIDS Project	Inland AIDS Project	Total
Catholic Charities	39	2	5	88	134
Desert AIDS Project		42	0	3	45
Foothill AIDS Project			84	39	123
Inland AIDS Project				349	349

Seeking assistance from more than one provider was due, in all likelihood, to delays in the execution of contracts from the grantee to the project sponsor resulting in cash flow limitations. It has been reported that some provider agencies lacked the financial reserves to continue to offer assistance while others lacked confidence in the stability of the HOPWA program itself. It is interesting to note that the Inland AIDS Project provided housing and utilities assistance to 349 unduplicated clients and to 130 (95%) of the 137 who sought service from two or more providers. This level of service speaks to that agency's capacity and its Board of Directors' commitment to provide housing and utility assistance during times of uncertain funding.

TABLE 65.

Actual expenditures by type of assistance, San Bernardino County, April 1, 1997-December 31, 2000		
Type of Assistance	HOPWA Funds	Row %
Rental Assistance	\$746,659.35	90%
Utilities Assistance	\$81,170.86	10%
Total	\$827,830.21	100%

When the expenditure data presented in table 65 are compared with the units of service presented in table 63, the unit cost can be determined. The data indicate that the average direct service cost per month of housing assistance was \$493.93 and that the average direct service cost per month of utilities assistance was \$98.61.

Prevention Education

The San Bernardino County Department of Public Health AIDS Program provides comprehensive prevention education services, consisting of both primary and secondary prevention efforts. The health promotion and education service unit is

responsible for informing, educating, motivating and empowering the residents of San Bernardino County to engage in healthier behaviors directed toward reducing the spread of HIV infection.

The AIDS Program is committed to providing the most up-to-date prevention education to residents of San Bernardino County. Toward this goal, the health education unit conducts periodic community needs assessments with respect to HIV prevention, develops and implements appropriate intervention activities with at-risk populations, and evaluates the effectiveness of these prevention projects. Target populations include: men who have sex with men, injection drug users and their sex partners, at-risk youth and the general population.

Primary prevention education efforts include, but are not limited to: one-on-one street outreach to target populations; small and large group prevention education presentations; recruitment of peer educators from target populations; the provision of one-on-one risk reduction workshops for high risk HIV negative individuals; the provision of anonymous and confidential HIV antibody counseling and testing and hepatitis C screening to the community and particularly within substance use/abuse recovery facilities; and the development of localized safer sex campaigns and prevention messages encouraging risk reduction behaviors. Specific secondary prevention efforts include: one-on-one client-centered assessments of HIV knowledge and risk behavior among individual clients enrolled in the San Bernardino County HIV Clinics; and the provision of ongoing behavior change support for those living with or at risk of HIV.

Additionally, the AIDS program health education unit participates in various community events including health fairs and other HIV/AIDS-related events (e.g. Riverside/San Bernardino Pride Festival, World AIDS Day events, National HIV Testing Day, Youth HIV Peer Summit and an annual AIDS Walk). Prevention education activities also encompass the development and implementation of local media campaigns (e.g. World AIDS Day and National HIV Testing Day).

Outreach staff and health educators alike distribute prevention education materials to at-risk individuals as well as to the general public.

Prevention materials include, but are not limited to: HIV/AIDS literature, brochures, male and female condoms, dental dams, lubricants, bleach kits, and incentives for HIV antibody counseling and testing such as telephone cards and personal hygiene kits. The AIDS Program maintains a central warehouse of education and prevention items that are made available free of charge to individuals or groups and various community-based organizations that serve at-risk populations.

Outreach, one-on-one clinic education and group prevention education presentations provide participants with general HIV/AIDS information including: the agent of infection, transmission of HIV, the mechanism of HIV infection within the body progressing towards AIDS, risk behaviors associated with HIV, and prevention techniques. Information regarding local HIV antibody counseling and testing sites is also distributed to participants, while some venues may allow for on-site testing for interested persons.

Group presentations are population specific, interactive and designed to motivate behavior change among participants. Presentations are often enhanced with the use of slides, PowerPoint programs and/or Positively Speaking presenters. Positively Speaking presenters are well-trained individuals infected/affected with HIV who share their personal stories with an audience. The use of such speakers places a “personal spin” on prevention education and puts a human face on the HIV/AIDS epidemic.

Ongoing, clinic-based education assists clients in coping with newly diagnosed HIV infection, understanding pathologic and physiologic changes that occur, adhering to complex medication regimens, preventing secondary transmission of HIV through risk reduction activities and connecting clients to appropriate support groups or other needed services.

All prevention education activities, whether primary or secondary, are committed to client confidentiality, integrity, and self-empowerment. The highest priority for targeted prevention education in San Bernardino County addresses men who have sex with men. Other target populations include injection drug users and their sex partners, people of color, incarcerated populations and at-risk youth. The Department of

Public Health currently contracts with Bienestar Human Services Inc, the Desert AIDS Project, Foothill AIDS Project and the Inland AIDS Project to expand and enhance its prevention efforts.

Conclusion

There is no cure for HIV disease at this time. In 1997, President Clinton authorized \$17 million for the development of a vaccine. The new drug treatment regimens offer the potential for providing HIV-related care in the context of chronic disease management. Highly active antiretroviral therapy (HAART) might also reduce the likelihood of secondary HIV transmission by lowering patients' viral burden. It has also been shown that the early identification and treatment of STDs lowers the likelihood of HIV transmission.

History has shown that viral diseases can be controlled and even eliminated by vaccinating the susceptible population. Until an effective vaccine is developed, primary and secondary prevention education constitute the best "vaccine" available.

The age distribution, gender, race/ethnicity, city and county of residence, and risk profile of people with HIV/AIDS is clearly known. The most susceptible population consists of those who engage in well-recognized risk behaviors associated with HIV transmission. The two greatest risk behaviors for transmission of HIV are unprotected sex and sharing needles. Since the amount of funding available for the "vaccine" is limited in San Bernardino County, it is incumbent on prevention planners to "vaccinate" those with the greatest risk. These would include men who have sex with men; injection drug users and their sex partners; female sex partners of bisexual men; and infected women of childbearing age. Special efforts are indicated for the latter as available data suggest that the risk of perinatal transmission can be greatly reduced through appropriate medical intervention.

Not having sex (abstinence) and not sharing needles are the only ways to be 100% safe from HIV. Using latex barriers during sex and cleaning needles and syringes will reduce the likelihood of HIV transmission.

Too much silence surrounding sexual behavior, needle use and misinformation about HIV/AIDS has produced almost two decades of infection. Whether the silence is due to fear, ignorance or denial, the outcome is the same. Ignoring HIV/AIDS and its impact on our community ensures that we will continue to be devastated by this deadly disease.

Without a cure and in the absence of a vaccine, prevention is the most effective weapon against HIV. Preventing initial infections and subsequent transmission of the virus is vital. Society saves approximately \$119,000 for each HIV infection prevented. More importantly, preventing infection saves individuals from illnesses, physical pain, and emotional hurt far greater than the financial loss.

Approximately 40,000 new infections occur in the United States each year, with almost 50% of these infections occurring in persons under the age of 25. The need to develop, implement and evaluate effective prevention efforts remains critical.

Reporting AIDS Cases

Section 2500 of Title 17, California Code of Regulations lists AIDS as a reportable disease. As such, providers are required to report all cases of AIDS, or suspect cases of AIDS, to be investigated by the local health officer under section 2512 of Title 17.

Note: Effective July 1, 2002 HIV was mandated reportable under Section 2643 of Title 17 by the State of California. Under this mandate, health care providers, laboratories, and confidential test sites are required to report HIV infections to their designated public health departments. The reporting of HIV infections to the San Bernardino County Department of Public Health AIDS/STD Control Program will be reported to the State of California using a non-name code. This data will be available in the annual AIDS Program Report 2002.

For more information about reporting AIDS cases and/or HIV infections (including case definitions and/or case report forms), assistance in reporting a case, or to receive copies of this AIDS Program Report, contact the San Bernardino County AIDS/STD Control Program at the following address:

San Bernardino County
Department of Public Health
AIDS/STD Control Program
799 East Rialto Avenue
San Bernardino, CA 92415-0011
(909) 383-3060